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ABSTRACT

This training manual written for elementary and secondary school teachers in the Columbus, Ohio, Public Schools, explains how to use the Internet. An introduction explains how computers in different locations can be connected and provides a general description of telecommunications software. How to log in and how to use various Internet tools are described. Worksheets are included to help the reader learn and practice the approaches to the Internet. Specific Internet resources, including AskERIC, are described. Ideas for using the Internet in projects are summarized, and resources that provide pointers for lesson plans are reviewed. Local library catalogs in the Columbus area and local bulletin boards are also introduced. A guide to troubleshooting is included, along with a glossary and a bibliography of 15 sources. (SLD)

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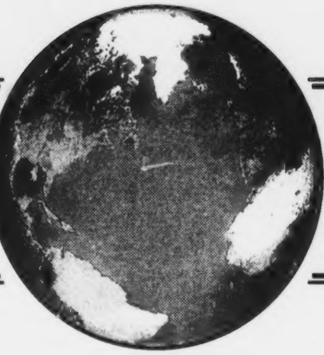

BY
LINDA C. JOSEPH

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FOREWORD

World Link was a dream which originated nearly eight years ago before all the publicity about Internet and the information superhighway. At that time the project was called Link to the World and it involved connecting to a few library subscription services with a 300 baud modem and an Apple IIe computer. The modem was slow and the services were not all that user friendly to students or teachers.

Two years ago each of the library media centers in the Columbus Public Schools was wired with a dedicated telephone line as part of a distance education grant . This gave each library the potential to connect modems and computers to the world. With this initial setup, schools could connect to the Columbus Metropolitan Library's online catalog, Discovery Place, and a few bulletin board services.

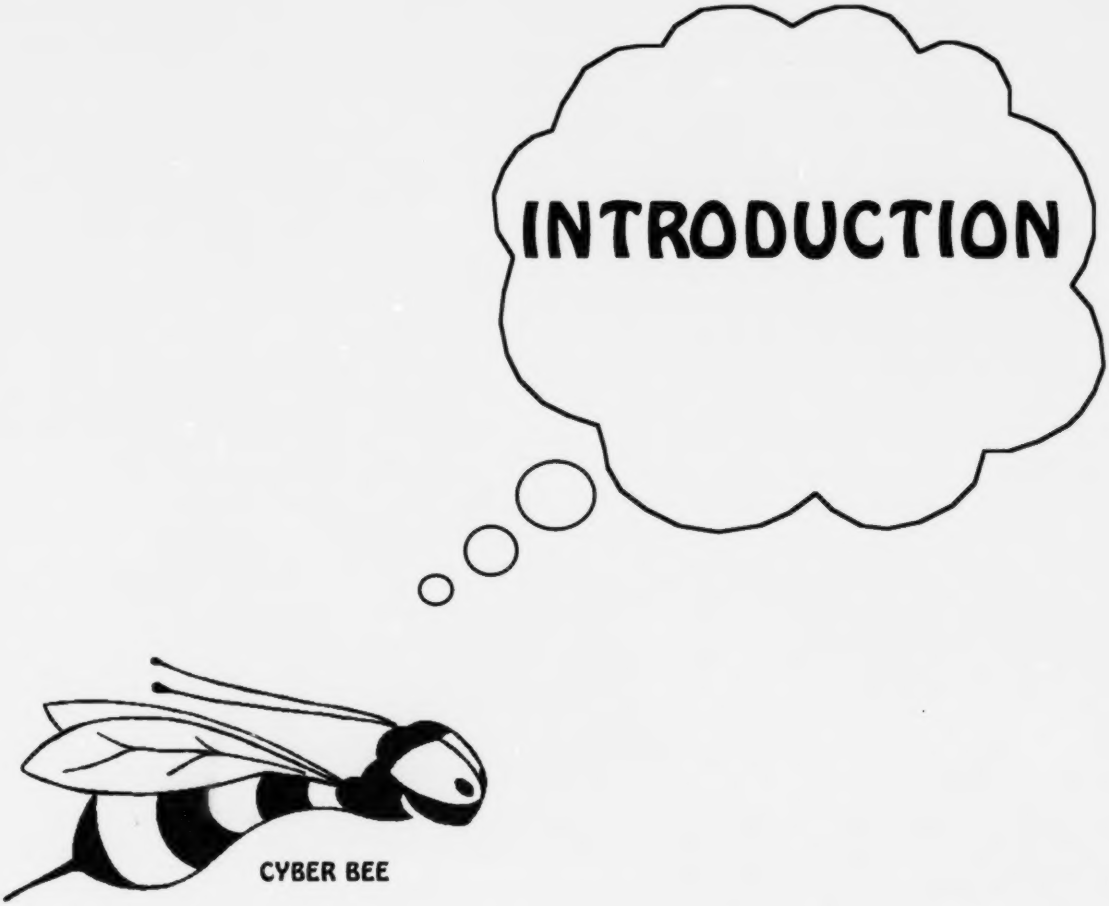
In the spring of 1992, a university professor offered me an Internet account if I would send him e-mail each week about my Internet exploration. For the next few months without any sort of manual I stumbled through the commands and figured out how to navigate. To this professor I am deeply indebted. One year later, the OhioLink gopher system became available through a dial-up connection to the Ohio State University. Although it was not a full access Internet service, it would allow us to search and retrieve vast amounts of information.

After cruising down the information highway, it was apparent there was a place for it in the K-12 curriculum. How would I coax my colleagues to use it? Writing a training manual seemed like a good idea, but the instructions had to be step by step and understandable. Hands-on instruction and dissemination were also essential. This led to the writing of a teacher training grant. With funding from the Martha Holden Jennings Foundation and support from the Department of Library Media Services of the Columbus Public Schools the dream became a reality. The publication of this instruction manual and monthly newsletter as well as the hands-on training sessions conducted for curriculum supervisors, library media specialists, teachers, and other district staff are the results of this important grant project.

This book is meant to be a living document. As new services are added and changes made on the Internet, revisions will be made. The monthly newsletter, *World Link*, compliments this book by pointing to current projects and providing information about new resources.

L.C.J.

INTRODUCTION



Chapter 1

INFORMATION ACCESS

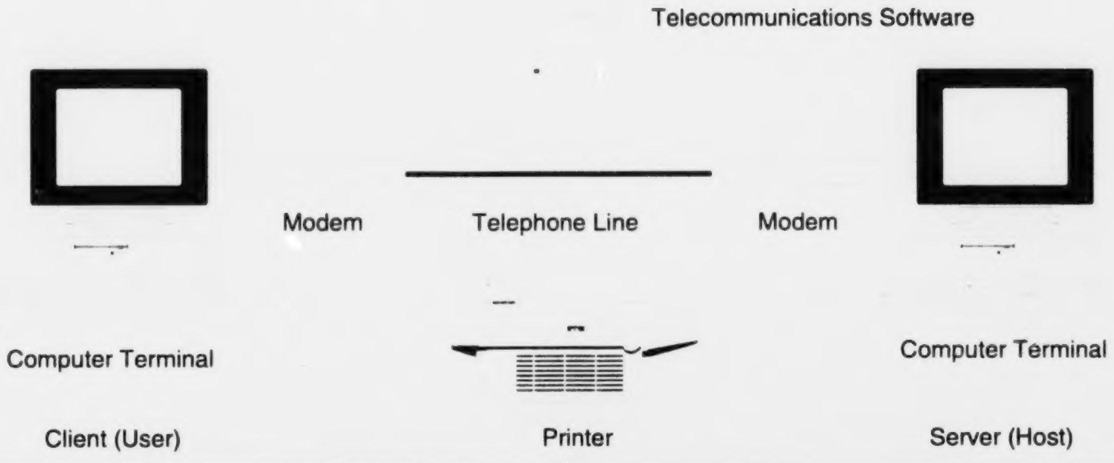
Computers at different locations can talk to each other when they are connected by a telephone line and a translator box called a modem. Information or data is sent over the telephone line in the form of electronic signals called bits. The modem translates these so that one computer can communicate with another computer in the same language.

In order to connect online with another computer, the following equipment is needed: computer terminal (ex. Apple IIe, IIc, IIgs, Macintosh, IBM, etc.), telephone line and connection wire, a modem (2400 baud modem or higher would be best), and a telecommunications software program to run on the computer. It would also be beneficial to have a printer.

Full Internet access which includes e-mail, ftp, telnet, gopher, and other useful tools can be obtained in a variety of ways. Dial-up, direct connection (node) and SLIP or PPP. Dial-up is simply using a modem, telephone line and local phone number. Direct connection would be a computer (node) wired to a local area network or wide area network which had a direct link to the Internet. SLIP (Serial Line Internet Protocol) or PPP (Point to Point Protocol) are connections over a phone line to a service provider which allows direct connection to the Interent. Both the user and the service provider must be running the same software in order for the connection to be made.

Universities generally have high speed telephone line connections to the Internet. Many can provide dial-up access and/or direct access depending on the system setup. Contact the System Operator and see if there is a way to gain connection through their computer network. State Networks, Free-Nets, or Public Library Networks are another option. Commercial vendors are also offering connection to Internet for a monthly fee.

The next few pages will give step by step instructions in the use of dial-up services, databases, and the Internet. There will be new terms used which may not be fully understood without hands-on experience. This is a unique learning opportunity to link with the world.



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TELECOMMUNICATIONS SOFTWARE

There are many software programs used to communicate with another computer. MacKermit (freeware), RedRyder, and ZTerm (shareware) are programs for the Macintosh. Integrated packages such as Clarisworks and Microsoft Works also contain a communications module. ProComm and ProComm Plus for Windows can be used on DOS systems. ProTerm is an easy to use software program for the Apple IIe and IIgs.

What The User Needs To Know

In order to set up the telecommunications settings in the software package, the user must know a few definitions.

➤ Baud Rate

The speed at which the modem transmits data is called the baud rate. Baud rates can range from 300 (very slow) to over 14,400 (very fast). The modems sold today are usually 2400, 9600, or 14,400.

➤ Data Bits

Data bits are the number of ASCII characters (either 128 or 256) which the host computer will be sending. This is expressed in either 7 or 8. The standard on most host computers today is 8 data bits.

➤ Parity

Parity is a form of error checking between computers. The settings can range from even, odd, mark, space, or none. Normally error checking is not used and the parity is set to none.

➤ Stop Bit

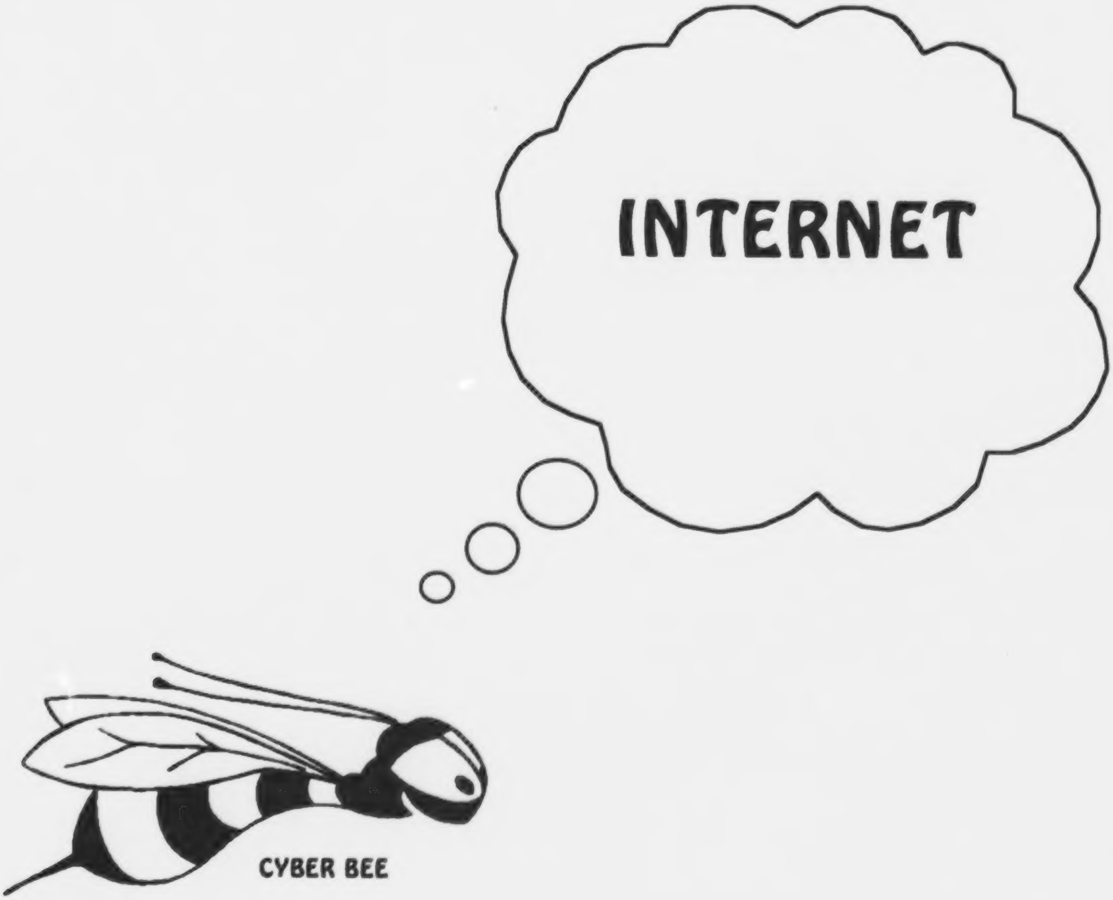
The stop bit marks the end of a character. 1 stop bit is the standard.

How These Terms Are Expressed

The above terms when combined are expressed in this way: 8N1 which equals 8 data bits, no parity, and 1 stop bit.

➤ Terminal Emulation

The user also needs to know if terminal emulation is required by the host computer. Terminal emulation makes the host computer think it is communicating with the same kind of computer at the user site. VT100 is a common type of terminal emulation. The user will need to select VT100 in the telecommunications software if the host computer requires it.


INTERNET
CYBER BEE

Chapter 2

LOGIN

Logging on to a network depends on the computer operating system at the host site. In general you will be asked for a login and a password. Your login is a form of your name. The password is either letters or a series of letters and numbers you have chosen which are unique to you. The password is your security and you should consider changing it now and then to prevent others from getting into your account. You may also be asked to select the type of terminal emulation. In most cases this is VT100.

There are different system prompts depending on the host computer.

Examples of System Prompts:

{ }	MAGNUS at Ohio State University running a UNIX shell
>	UNIX
$	VAX/VMS
%	UNIX/XENIX/A/AX
:	UNIX

Common UNIX Commands

man <command>	display the manual page for the command
cd <pathname>	change directory
fse	initiates the full screen text editor if available
ls	list files (list current directory)
more <file name>	display the contents of a file (space bar to continue)
mm	the Columbia MM electronic mail package
rn	the USENET news access command
cp <file1> <file2>	the UNIX copy command
mv <file1> <file2>	the UNIX move command (*rename* and/or relocate a file)
rm <file name>	the UNIX remove command (*erase* or *delete* a file)
pico	initiates the pico text editor if available
pine	initiates the pine e-mail system if available
printacs <file>	print the contents of a file (*man printacs* for more info)
logout	this is how you would normally end you UNIX session
menu	this will take you into the main menu system

E-MAIL

Electronic mail allows the user to communicate with others over a network. The advantages of using e-mail are instant correspondence with colleagues, access to listserv discussion groups, and a gateway to the global community.

There are several different types of e-mail programs which allow the user to communicate over the Internet. The basic information the user must know is the address of the person for correspondence and a few commands. Internet addresses are expressed in terms of the userid at the place where the user has an account called the domain or host. Here is an example of an e-mail address:

userid@domain (also called host)
jdoe@magnus.acs.ohio-state.edu

Note that one of the subdomain extensions on this host is edu. This tells the user that this is an educational institution. You can also identify geographical domains such as the United States by the extension us. Here are some common subdomains:

com	commercial
edu	education
gov	government
int	international
mil	military
net	network
org	organization

To send e-mail using the Unix system or ELM type the following:

At the command prompt >	**m** [mail]
To:	**userid@domain**
Subject:	topic for discussion
Cc:	address of a person you want to receive a carbon copy or press return for none

The VMS mail system uses a different addressing style:

At the system prompt >	**m**
To:	**IN%"userid@domain"**
Subject:	topic for discussion
Cc:	address of a person you want to receive a carbon copy or press return for none

Pine e-mail system is menu driven:

At the main menu	**c** for compose and send message
To:	**userid@domain**
Cc:	address of a person you want to receive a carbon copy or press return for none
Attchmnt:	filename to send with the e-mail message
Subject:	topic for discussion

At this point you will encounter either a system prompt for line by line messages or a full screen text editor. If you are in a line by line e-mail program, you will not be able to go back to the previous line for editing. In a full screen text editor you will be able to go back and make changes.

After typing your message end the program and send the e-mail.

E-Mail Program	Command to Send E-Mail
ELM:	**control-e**, then **s** for send
VMS:	**control-z**
Pine:	**control-x**

To reply to an e-mail message:

At the system prompt > **r**

You are now in the area for typing your message. The mailer already has the address and subject for your reply. Use the send command for your system to send the message.

To delete a message:

At the system prompt > type **d** and the number of the message you want to delete

example: > **d 1** or **d 1-5**

To undelete a message:

At the system prompt > type **u** and the number

example: > **u 1**

To save a message:

At the system prompt > type **s** and the filename

example: > **s education**

Signature File:

The signature file is one you create which will automatically be appended to your e-mail and usenet messages. Your signature is information unique to you. Generally, it will have your name, address of your organization, a phone number, and your e-mail address. Some signatures contain a quote or witticism. The established netiquette is that the signature be no longer than four lines.

To Create a Signature File:

Step 1. Start you text editor such as pico.
Step 2. Enter the signature information you want attched to your e-mail.
Step 3. Save the file as .signature

To Create a Signature with ELM:

In order to have ELM attach a signature file, you must edit the elmrc file.

Step 1. Change your directory to the one containing **elmrc** file. This is probably your Mail directory.

Step 2. At the system prompt start your screen editor such as fse

```
> fse elmrc
```

Step 3. Move the cursor to the line below:

```
# local ".signature" file to append to appropriate messages...
```

Press control-f to move down a page at a time

At remotesignature = type the name of your signature file. The two lines should now read:

```
#local ".signature" file to append to appropriate messages...
localsignature = <signature filename>
```

Step 4. Continue moving the cursor to the line below:

```
#remote ".signature file to append to appropriate messages...
```

At the remotesignature = type the name of your signature file. The two lines should now read:

```
#remote ".signature file to append to appropriate messages...
remote signature = <signature filename>
```

Here is an example of a signature file:

```
*****************************************

Jane C. Doe                                Somewhere Public Schools
Library Media Specialist                   Main Street
xxx-xxx-xxxx                               Columbus, Ohio 43211
jdoe@magnus.acs.ohio-state.edu

"Cyberspace... the endless frontier"

******************************************
```

A Word About Smiles:

When communicating on the Internet, your facial expressions and vocal intonations are not visible or audible to the other person in the e-mail message. Sometimes you might say something which you think is funny, but the person on the receiving end may not understand. This is where smiles come into play. They are typed character patterns on the screen which help the reader understand the meaning of what you are saying. There are some basic designs as well as more elaborate ones. They are fun to create. In fact, there are smile dictionaries available on the Internet. The *Unofficial Smile Dictionary* by Guy Kawasaki is one example.

Here are the basics taken from the Unofficial Smile Dictionary:

The Unofficial Smilie Dictionary

:-)	Your basic smilie. This smilie is used to inflect a sarcastic or joking statement since we can't hear voice inflection over Unix.
;-)	Winky smilie. User just made a flirtatious and/or sarcastic remark. More of a "don't hit me for what I just said" smilie.
:-(	Frowning smilie. User did not like that last statement or is upset or depressed about something.
:-I	Indifferent smilie. Better than a Frowning smilie but not quite as good as a happy smilie
:->	User just made a really biting sarcastic remark. Worse than a :-).
>:->	User just made a really devilish remark.
>;->	Winky and devil combined. A very lewd remark was just made.

For those of you who love the "mouse". Here are two from the Disney News Group.

```
()~()
 (_)   Minnie Mouse

()_()
 (_)   Mickey Mouse
```

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FINGER

The finger command gives you information about a person . It will tell you the location of their account and their account name as well as the last time they logged in on the system. In addition, a .plan file can be created by the individual which is world readable. The information provided in this .plan file can range from conference dates to the latest earthquake information. For example, suppose you were conducting a workshop about education reform, you could post the syllabus in your finger file which others could view.

Step 1. At the system prompt > **finger userid@host**

example: > **finger jdoe@magnus.acs.ohio-state.edu**

You would receive this information about the person and see that the .plan file is a happy greeting:

```
Login: jdoe                             Name: Jane C. Doe
Directory: /acs/bottom/2/jdoe           Shell: /usr/local/bin/tcsh
On beauty since Sun Jun 12 15:57 (EDT) on ttypb from sonngate-9600.acs.ohio-stat
e.edu
Last login Sun Jun 12 15:57 (EDT)
Plan:
"May the sun shine upon your rooftop
 And the rain bounce up against your barefeet"
```

Here is an example where an individual has posted timely events and a sports schedule as their .plan file and deleted personal information.

example: > **finger copi@oddjob.uchicago.edu**

You would receive this information:

```
                          Saturday
                       June  4, 1994
                     6:38:12 PM (CDT)

              Greenwich Mean Time: 11:38:12 PM

             Day 155 and Week 22 of current year
          13,372,692 seconds elapsed in current year
             204 shopping days until Christmas

               Phase of moon: waning crescent
            Age of moon 4 days (to next new moon)

                    The year of the Dog
               ****************** Special Events ******************
               * Birth: King George III (England) (256 years ago) *
               * Death: Ayatollah Ruhollah Khomeini (5 years ago) *
               ***************** Event: Donut Day *****************
               **** Event: 1st minimum wage law (82 years ago) ****
               * Event: Massacre in Tianamen Square (5 years ago) *
               ****************************************************

Here is a list of upcoming games
 (note: all times are EDT)
MLB schedule for today...
   (WGN)  White Sox    at Orioles      (7:05 pm)
          Indians      at Athletics    (4:05 pm)
          Royals       at Yankees      (1:35 pm)
  (WTBS)  Dodgers      at Braves       (7:10 pm)
          Brewers      at Angels       (10:05 pm)
          Twins        at Tigers       (1:15 pm)
   (WGN)  Expos        at Cubs         (2:20 pm)
          Mets         at Reds         (7:05 pm)
          Phillies     at Astros       (8:05 pm)
          Pirates      at Rockies      (9:05 pm)
          Padres       at Marlins      (7:05 pm)
          Giants       at Cardinals    (8:05 pm)
          Rangers      at Red Sox      (1:05 pm)
          Blue Jays    at Mariners     (10:05 pm)
```

Creating a .plan file:

Step 1. Be sure you are in the system shell
Step 2. At the system prompt > start you text editor such as pico or fse
You start your editor simply by typing the word pico or fse
Step 3. Type what you want for your .plan (you might want to leave a blank line at the top to separate it from the rest of your finger information)
Step 4. When finished typing your file, exit your editor
In pico it is control-x In fse it is control-e
Step 5. save:y
Step 6. file: .plan (You must name the file .plan)
Hint: When you list the files in your directory .plan will not be listed. It is an invisible file. However, you can still read it and edit it. To read it type more .plan
When your text editor asks for which file to insert, type .plan
Step 7. At the system prompt type: chmod a+r ~/.plan (makes the file world readable)
(chmod is the command for changing the access mode of one or more files)
Step 8. At the system prompt type: chmod a+x ~ (makes the file world executable)
Step 9. At the system prompt type: ls -ld ~ (to check the file)
It should look like this
drwx—x—x
Or another way to check is to finger yourself.
You should see what you typed in your .plan file

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TALK

Two-way conversations can take place on Internet using the Unix talk program. You do not actually communicate by speaking, but by typing messages back and forth on a split screen. Both parties can agree to communicate at a specified time if they are in different locations. If both have accounts at the same host either can check to see if the other person is logged on and initiate a talk session.

To initiate a talk session:

Step 1. At the system prompt > type talk and the person's userid@host

example: > **talk jdoe@ohionet.org**

A message will appear on their screen

```
Message from Talk_Daemon@ohionet.org  at  10:03
talk: connection requested by user@magnus.acs.ohio-state.edu
talk: respond with:      talk user@magnus.acs.ohio-state.edu
```

To respond to the talk request:

Step 1. At the system prompt > type talk user@host

example: > **talk user @magnus.acs.ohio-state.edu**

To break the connection press **control-c**.

Example of Talk Session:

```
Linda, are you the Demo woman today?
So this is what I am doing.  I hoped I had won the lottery or something.
Sounds good to me!  If this is worth it. I can understand that.
By the way, Gonzalez ends in a z  Ha!
Hey I've been called worse.
Bye


--------------------------------------------------------------------------------


Hi Brenda, this is a demonstration of the talk command.
Yes, I need this for the World Link instruction manual.
No such luck, just a freebie for me.
Well, I need to get back to inserting corrections in the manual.
I just caught that this morning. Will make the change.
Bye
```

GOPHER

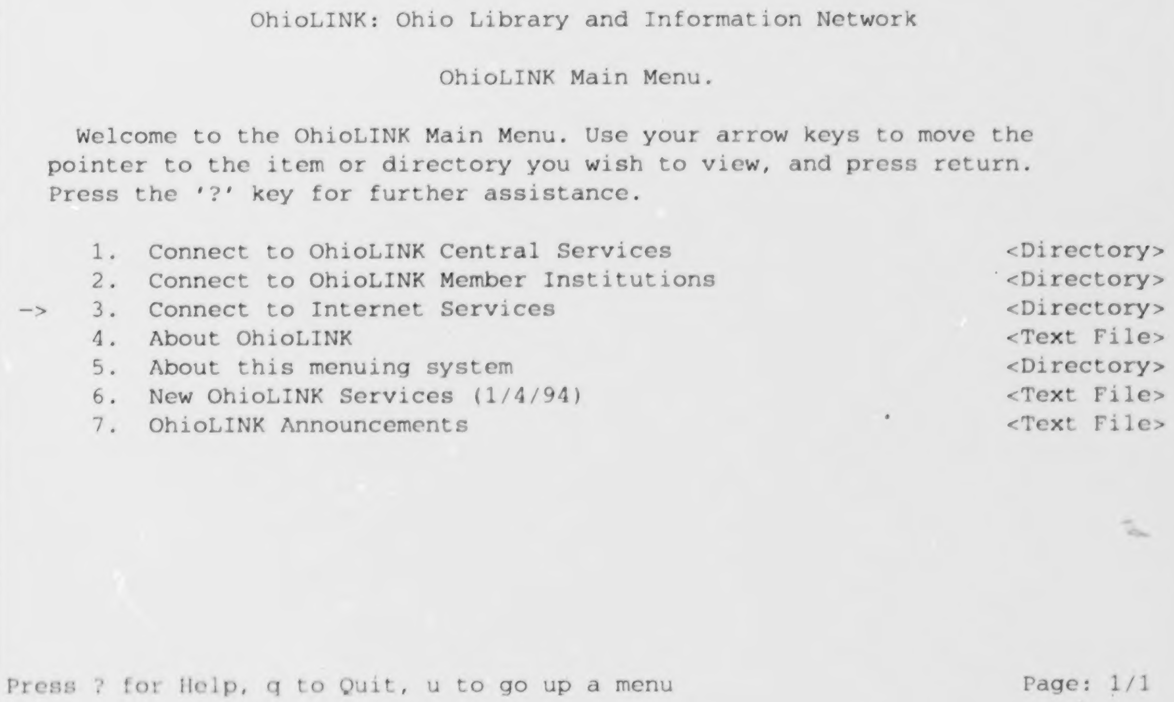
gopher n. 1. Any of various short tailed, burrowing mammals of the family Geomyidae, of North America. 2. (Amer. colloq.) Native or inhabitant of Minnesota: the Gopher State. 3. (Amer. colloq.) One who runs errands, does odd-jobs, fetches or delivers documents for office staff. 4. (computer tech.) Software following a simple protocol for tunneling through a TCP/IP internet.

The gopher system was developed by the University of Minnesota. It is an easy to use menu driven system which can access information from many different Internet sites all over the world. It can ftp, telnet, and allow you to e-mail a text file back to your own Internet address. This is an ideal way for beginners to learn what kind of resources are available.

Step 1. At the system prompt > type **gopher and the internet address**

example: **gopher cat.ohiolink.edu**

Example of a Gopher Menu:



```
                OhioLINK: Ohio Library and Information Network

                            OhioLINK Main Menu.

   Welcome to the OhioLINK Main Menu. Use your arrow keys to move the
  pointer to the item or directory you wish to view, and press return.
  Press the '?' key for further assistance.

      1.  Connect to OhioLINK Central Services                 <Directory>
      2.  Connect to OhioLINK Member Institutions              <Directory>
-->   3.  Connect to Internet Services                         <Directory>
      4.  About OhioLINK                                       <Text File>
      5.  About this menuing system                            <Directory>
      6.  New OhioLINK Services (1/4/94)                       <Text File>
      7.  OhioLINK Announcements                               <Text File>






Press ? for Help, q to Quit, u to go up a menu                 Page: 1/1
```

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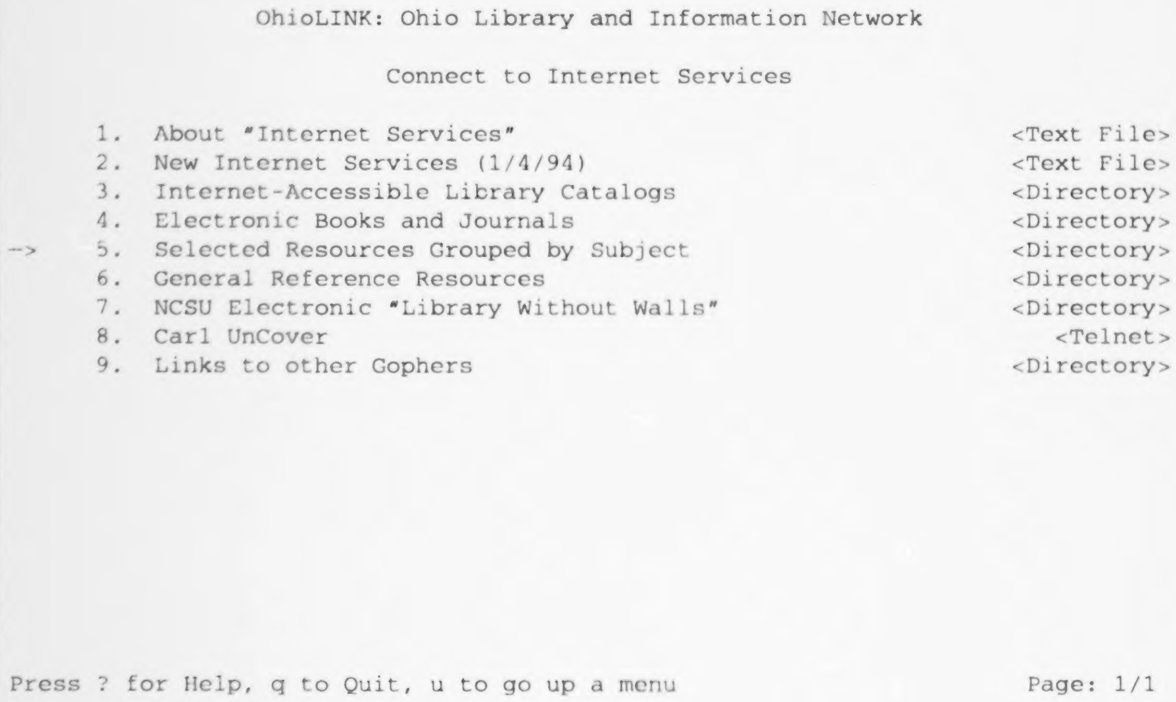
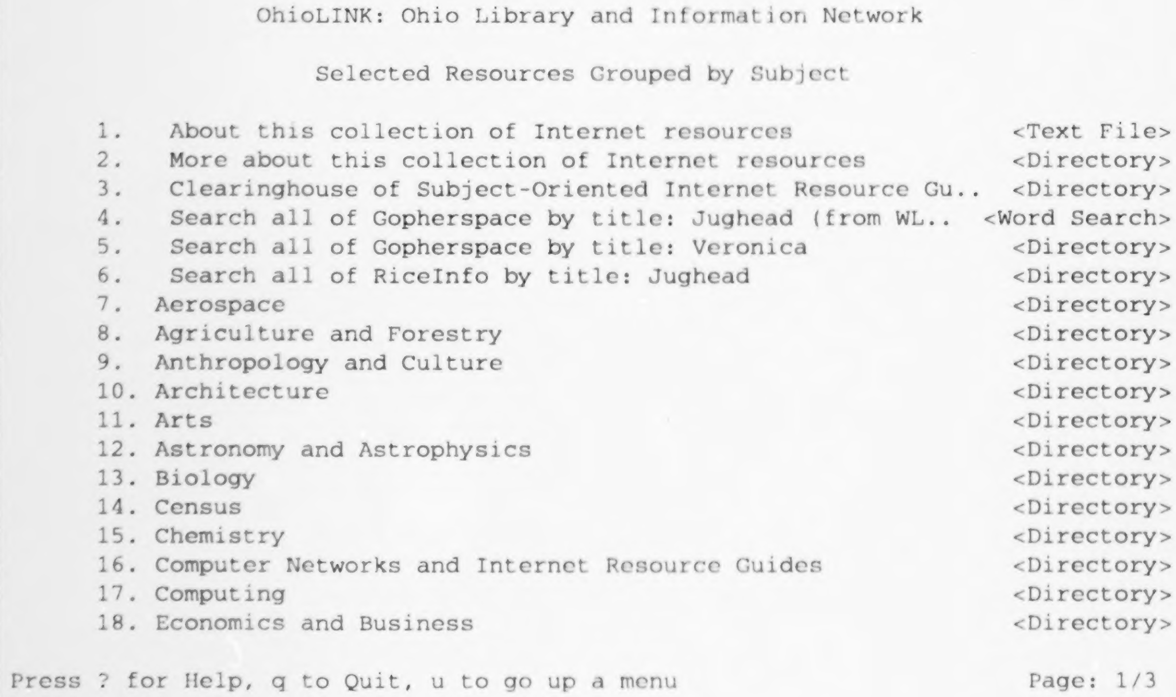
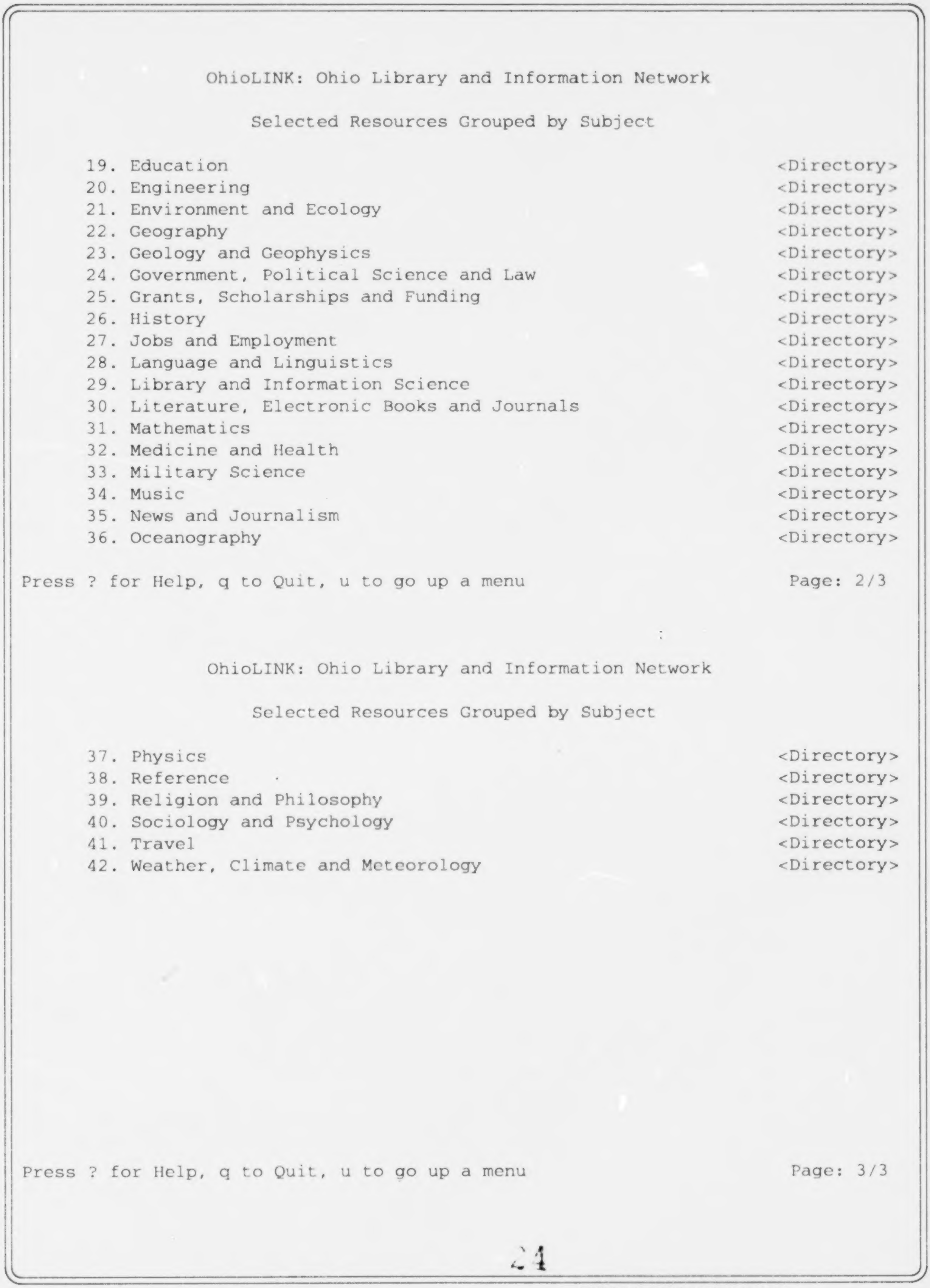


```
                OhioLINK: Ohio Library and Information Network

                         Connect to Internet Services

      1.  About "Internet Services"                                  <Text File>
      2.  New Internet Services (1/4/94)                             <Text File>
      3.  Internet-Accessible Library Catalogs                       <Directory>
      4.  Electronic Books and Journals                              <Directory>
-->   5.  Selected Resources Grouped by Subject                      <Directory>
      6.  General Reference Resources                                <Directory>
      7.  NCSU Electronic "Library Without Walls"                    <Directory>
      8.  Carl UnCover                                                  <Telnet>
      9.  Links to other Gophers                                     <Directory>









Press ? for Help, q to Quit, u to go up a menu                        Page: 1/1
```



```
                OhioLINK: Ohio Library and Information Network

                     Selected Resources Grouped by Subject

      1.   About this collection of Internet resources               <Text File>
      2.   More about this collection of Internet resources          <Directory>
      3.   Clearinghouse of Subject-Oriented Internet Resource Gu..  <Directory>
      4.   Search all of Gopherspace by title: Jughead (from WL.. <Word Search>
      5.   Search all of Gopherspace by title: Veronica              <Directory>
      6.   Search all of RiceInfo by title: Jughead                  <Directory>
      7.  Aerospace                                                  <Directory>
      8.  Agriculture and Forestry                                   <Directory>
      9.  Anthropology and Culture                                   <Directory>
      10. Architecture                                               <Directory>
      11. Arts                                                       <Directory>
      12. Astronomy and Astrophysics                                 <Directory>
      13. Biology                                                    <Directory>
      14. Census                                                     <Directory>
      15. Chemistry                                                  <Directory>
      16. Computer Networks and Internet Resource Guides             <Directory>
      17. Computing                                                  <Directory>
      18. Economics and Business                                     <Directory>

Press ? for Help, q to Quit, u to go up a menu                        Page: 1/3
```



```
                OhioLINK: Ohio Library and Information Network

                    Selected Resources Grouped by Subject

     19. Education                                          <Directory>
     20. Engineering                                        <Directory>
     21. Environment and Ecology                            <Directory>
     22. Geography                                          <Directory>
     23. Geology and Geophysics                             <Directory>
     24. Government, Political Science and Law              <Directory>
     25. Grants, Scholarships and Funding                   <Directory>
     26. History                                            <Directory>
     27. Jobs and Employment                                <Directory>
     28. Language and Linguistics                           <Directory>
     29. Library and Information Science                    <Directory>
     30. Literature, Electronic Books and Journals          <Directory>
     31. Mathematics                                        <Directory>
     32. Medicine and Health                                <Directory>
     33. Military Science                                   <Directory>
     34. Music                                              <Directory>
     35. News and Journalism                                <Directory>
     36. Oceanography                                       <Directory>

Press ? for Help, q to Quit, u to go up a menu                Page: 2/3
```

```
                OhioLINK: Ohio Library and Information Network

                    Selected Resources Grouped by Subject

     37. Physics                                            <Directory>
     38. Reference                                          <Directory>
     39. Religion and Philosophy                            <Directory>
     40. Sociology and Psychology                           <Directory>
     41. Travel                                             <Directory>
     42. Weather, Climate and Meteorology                   <Directory>

Press ? for Help, q to Quit, u to go up a menu                Page: 3/3
```

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Moving Around Gopherspace

Press return to view a document

Use the Arrow Keys or vi/emacs equivalent to move around

Up ....: Move to previous line.
Down ....: Move to next line.
Right Return ....: "Enter"/Display current item.
Left, u ....: "Exit" current item/Go up a level.

>, +, Pgdwn, space ..: View next page.
<, -, Pgup, b ....: View previous page.

0-9 ....: Go to a specific line.
m ....: Go back to the main menu.

Bookmarks

a : Add current item to the bookmark list.
A : Add current directory/search to bookmark list.
v : View bookmark list.
d : Delete a bookmark/directory entry.

Other commands

s : Save current item to a file.
D : Download a file.
q : Quit with prompt.
Q : Quit unconditionally.
= : Display Technical information about current item.
O : change options
/ : Search for an item in the menu.
n : Find next search item.
o : Open a new gopher server
! : Shell Escape

VERONICA AND JUGHEAD

There are also search tools for finding information in gopherspace. Veronica and Jughead are programs designed to allow the user to search by keyword. Veronica searches titles in all of gopherspace while Jughead searches a specific server at one location. Veronica and Jughead can be accessed through a gopher system. Look for Veronica or Jughead on one of the menu screens. After executing the search, Veronica or Jughead will return a list of items matching the keyword. To reach an item on the list, point to it and press return.

VERONICA AND JUGHEAD STEP BY STEP INSTRUCTIONS:

Step 1. Connect to an Internet Gopher Server
Step 2. Select a Menu Item such as: Search Gopherspace using Veronica or
        Search Site using Jughead
Step 4. Select Either Jughead or a Veronica Site
Step 5. Type the keyword
Step 6. Receive results

Example of Veronica Search:

```
                    Search title in Gopherspace using Veronica

      1.  FAQ:  Frequently-Asked Questions about veronica  (1993-..  <Text File>
      2.                                                             <Text File>
      3.  Search gopherspace (veronica) via University of Koeln    <Word Search>
      4.  Search gopherspace (veronica) via U.Texas, Dallas        <Word Search>
      5.  Search gopherspace (veronica) via University of Pisa     <Word Search>
 ->   6.  Search gopherspace (veronica) via NYSERNet               <Word Search>
      7.  Search gopherspace (veronica) via UNINETT..U. of Bergen  <Word Search>
      8.  Search gopherspace (veronica) via SCS Nevada             <Word Search>
      9.  Search Gopher Directory Titles via University of Koel..  <Word Search>
      10. Search Gopher Directory Titles via U.Texas, Dallas       <Word Search>
      11. Search Gopher Directory Titles via University of Pisa    <Word Search>
      12. Search Gopher Directory Titles via NYSERNet              <Word Search>
      13. Search Gopher Directory Titles via UNINETT... of Bergen  <Word Search>
      14. Search Gopher Directory Titles via SCS Nevada            <Word Search>


 +-------------Search Gopher Directory Titles via U.Texas, Dallas------------+>
 |                                                                           |>
 | Words to search for  earthquake                                           |>
 |                                                                           |>
 |                                      [Cancel ^G] [Accept - Enter]         |>
 |                                                                           |>
 +---------------------------------------------------------------------------+>


->    1.  L.A. Earthquake Information                              <Directory>
```

```
   2.  94-earthquake                                               <Directory>
   3.  California, OES Earthquake Program                          <Directory>
   4.  Weather & Earthquake Information                            <Directory>
   5.   ***Northridge (LA) Earthquake Information ***              <Directory>
   6.  CALIFORNIA EARTHQUAKE EDIS Updates-Local EPIX archive       <Directory>
   7.  Caltech, Earthquake Engineering Laboratory (CALTECH)        <Directory>
   8.   ftp:lamont.columbia.edu : NCEER (Earthquake) - related..   <Directory>
   9.  Fault Lines - Earthquake Safety Updates                     <Directory>
   10. L.A. Earthquake Information                                 <Directory>
   11. 2. Earthquake Information                                   <Directory>
   12. OKGEOSURVEY POSTSCRIPT SEISMOGRAMS v seismogram earthqu..   <Directory>
   13. Earthquake Information                                      <Directory>
   14. Earthquake Information Gopher                               <Directory>
   15. Caltech, Earthquake Engineering Laboratory (CALTECH)        <Directory>
   16. Earthquake_Info                                             <Directory>
   17. Northridge Earthquake                                       <Directory>
   18. Earthquake Information                                      <Directory>
```

Example of Jughead Search:

```
               OhioLINK: Ohio Library and Information Network

                  Search all of RiceInfo by title: Jughead

       1.  About this search of RiceInfo / About Jughead           <Text File>
 -->   2.  Search all of RiceInfo by title (jughead)             <Word Search>


+----------Search all of RiceInfo by title (jughead)-------------------+
|                                                                      |
| Words to search for  earthquake                                      |
|                                                                      |
|                                  [Cancel ^G] [Accept - Enter]        |
|                                                                      |
+----------------------------------+-----------------------------------+


               OhioLINK: Ohio Library and Information Network

             Search all of RiceInfo by title (jughead): earthquake

 -->   1.  Center for Earthquake Research and Information (CERI Me..  <Directory>
       2.  Earthquake Information Gopher (NISEE)                      <Directory>
       3.  Earthquake Information                                     <Text File>
       4.  Earthquake in Southwestern India-Sep. 30, 1993.  From ..  <Text File>
       5.  US National Earthquake Service Earthquake Lists            <Directory>
       6.  Indian_earthquake                                          <Directory>
       7.  Recent earthquake catalogs [FTP]                           <Directory>
       8.  Earthquake information from UWash (finger quake@geophys..  <Text File>
       9.  Earthquake in India                                        <Text File>
       10. QUAKELINE, National Center for Earthquake Engineering Rese..  <Telnet>
```

BOOKMARKS & DOWNLOADING IN GOPHER

Bookmarks:

Going through menu screens to reach your favorite resources each time you logon to Internet can be tedious. There is relief. With an Internet account and gopher you can set bookmarks. In essence, you will be creating your own customized menu. When you enter your bookmark menu, you point and go.

Step 1. Enter your gopher system
Step 2. Point to one of your favorite Internet sites such as NASA SpaceLINK
Step 3. Type a lower case **a** (this will add the item to your bookmark list)
Type an upper case **A** to add the entire directory
Step 4. Type a customized name for the item or press return to use the one on the screen
Step 5. Add other sites
Step 6. Type **v** to view and access your bookmark list
Step 7. If you want to delete an entry from your bookmark list, point to the entry and type **d**.

Downloading:

Another great feature of the gopher system is the ability to download files to your personal computer. Before you begin the downloading process, the telecommunications program must be set to one of these protocols, Kermit, Xmodem, Ymodem, or Zmodem.

Step 1. Point to the file entry or
after reading the text file type **q**
Step 2. Type **shift - D** (Upper Case D)
Step 3. Select the protocol you want to use

```
+----------Earthquake Info------------+
|                                     |
|   1. Zmodem                         |
|   2. Ymodem                         |
|   3. Xmodem-1K                      |
|   4. Xmodem-CRC                     |
|   5. Kermit                         |
|   6. Text                           |
|                                     |
|   Choose a download method:         |
|                                     |
|   [Cancel ^G]  [Choose 1-6]         |
|                                     |
+-------------------------------------+

Start your download now...
```

Step 4. Using your telecommunications software, receive the file

```
Download Complete. 2754 total bytes, 45 bytes/sec
Press <RETURN> to continue
```

TELNET

Telnet allows you to logon to a remote host and interact as though you were actually sitting at that computer terminal.

To telnet:

At the system prompt > type **telnet and the internet address**

example: **telnet spacelink.msfc.nasa.gov**

When initiating telnet sessions, sometimes you will have to know a login and password. Most lists or books containing telnet addresses, give this information. In some cases the host site will tell you the login and the password.

example: login: **NEWUSER**
password: **NEWUSER**

The host may also ask for the type of terminal emulation you are using. The most commonly used type of terminal emulation is VT100.

example: TERM = (unknown) > **VT100**

GENERAL TELNET STEP BY STEP INSTRUCTIONS:

Step 1. > **telnet internet address** [ex. telnet spacelink.msfc.nasa.gov]
Step 2. login: type the login password [ex. visitor]
Step 3. TERM= (unknown) > **VT100** [terminal emulation]

If your screen freezes or you are unable to exit a telnet host, you can escape.

To escape telnet 1. type **^]** control-right bracket
2. telnet> **q**

HYTELNET

The hytelnet program telnets for you and gives you the necessary information to logon to the system.

Example of Hytelnet Main Menu:

```
                    Welcome to HYTELNET
                        version 6.5
                       June 20, 1993

             What is HYTELNET?          <WHATIS>
             Library catalogs           <SITES1>
             Other resources            <SITES2>
             Help files for catalogs    <OP000>
             Catalog interfaces         <SYS000>
             Internet Glossary          <GLOSSARY>
             Telnet tips               ,<TELNET>
             Telnet/TN3270 escape keys <ESCAPE.KEY>
             Key-stroke commands        <HELP>

      ..............................................................
  Up/Down arrows MOVE       Left/Right arrows SELECT     ? for HELP anytime

             m  returns here       q  quits
      ..............................................................

           HYTELNET 6.5 was written by Peter Scott
          E-mail address: aa375@freenet.carleton.ca
```

Select: **Other Resources** **<Sites2>**

Select: **FREE-NETS & COMMUNITY COMPUTING SYSTEM**

FREE-NETs & Community Computing Systems

<FRE013> Big Sky Telegraph
<FRE012> Buffalo FREE-NET
<FRE022> CapAccess: National Capital Area Public Access Network
<FRE001> Cleveland FREE-NET
<FRE023> Columbia Online Information Network (COIN)
<FRE011> Denver FREE-NET
<FRE002> Heartland FREE-NET
<FRE008> Lorain County FREE-NET
<FRE017> National Capital Freenet, Ottawa, Canada
<FRE015> SENDIT
<FRE020> Tallahassee Free-Net

```
<FRE025> Traverse City Free-Net
<FRE005> Tri-State Online (Cincinnati)
<FRE021> Vaasa FreePort Bulletin Board (BBS)
<FRE018> Victoria FREE-NET
<FRE024> Virginia's Public Education Network
<FRE014> Wellington Citynet
<FRE003> Youngstown FREE-NET
```

Select: **CapAccess: National Capital Area Public Access Network**

```
        CapAccess: National Capital Area Public Access Network

TELNET CAP.GWU.EDU or 128.164.140.32
login: guest
Password: visitor

          CapAccess Main Menu

  1 Administration - User Services
  2 Post Office - Email, User Directories
  3 Public Forums
  4 Media Center
  5 Government Center
  6 Education Center
  7 Social Services Center
  8 Libraries
  9 Health Center
 10 Community Center
 11 Sports and Recreation Center
 12 Arts and Entertainment Center
 13 Business and Professional Center
 14 Science and Technology Center
 15 Policy Center
```

To end telnet:

Ending a telnet session depends on the commands of the host system. Some examples for logging out are quit, exit, bye, goodbye, and logoff. On some systems you will be able to choose the exit command from a menu.

WAIS

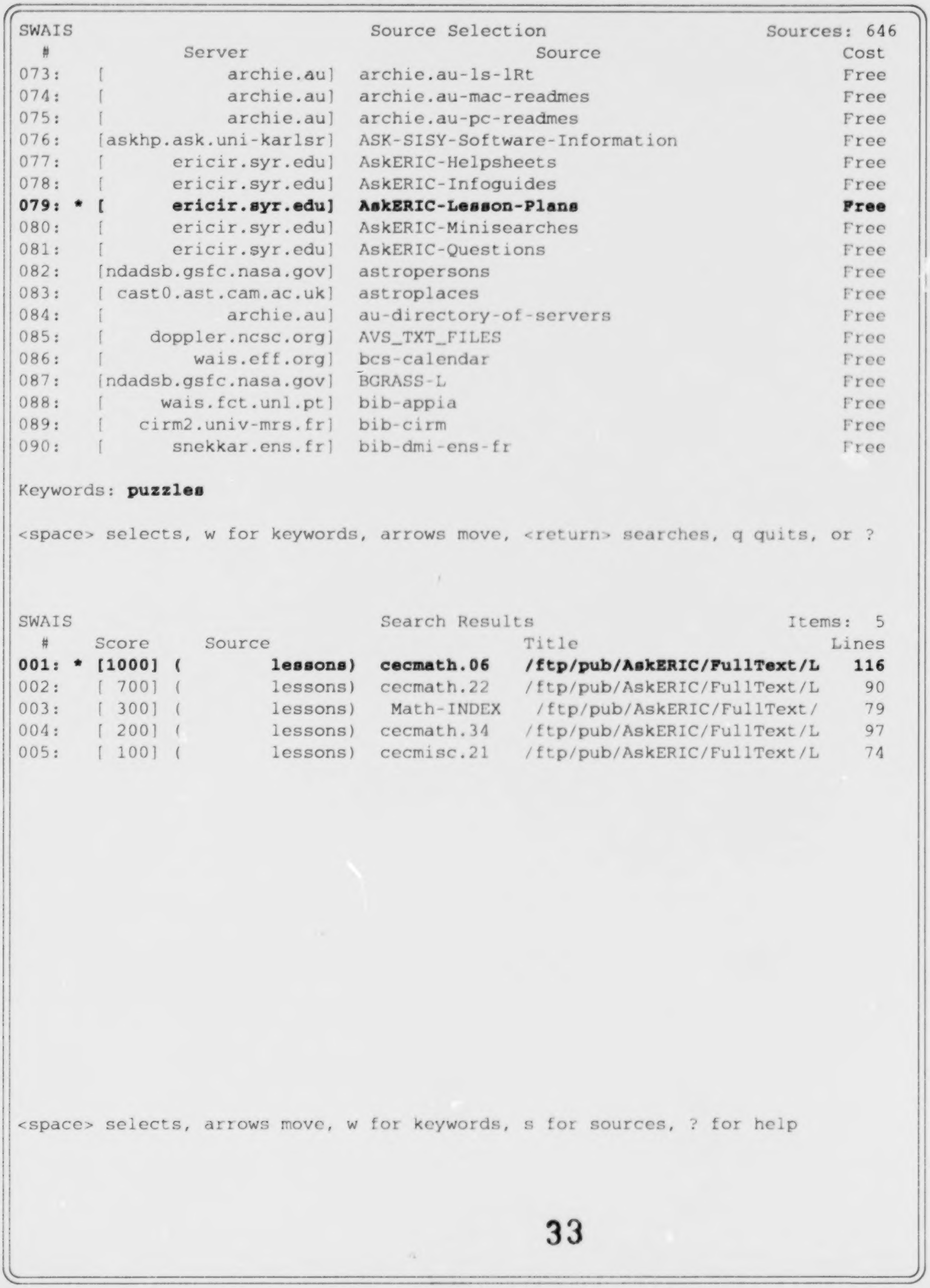
WAIS or wide area information server allows you to search indexed databases for information. Some wais servers are better than others.

WAIS STEP BY STEP INSTRUCTIONS:

Step 1. At the system prompt > telnet **sunsite.unc.edu**
Step 2. login: **swais**
Step 3. TERM = (unknown) **vt100**
Step 4. select the database to search by pressing the space bar
Step 5. type **w** for keyword
Step 6. Keywords: type in the keywords
Step 7. Use the arrow key to move to your selection then press the space bar
Step 8. Press the return key to view the document

Example of a WAIS Search:

```
> telnet sunsite.unc.edu
...Trying 152.2.22.81...
Connected to SUNSITE.UNC.EDU.
Escape character is '^]'.
****************** Welcome to SunSITE.unc.edu *****************

SunSITE offers several public services via login. These include:

For a simple gopher client,      login as gopher
For a simple World Wide Web client, login as lynx
For a simple WAIS client (over 500 databases),   login as swais
For WAIS search of political databases,      login as politics
For WAIS search of LINUX databases,        login as linux

For a FTP session, ftp to sunsite.unc.edu. Then login as anonymous

For more information about SunSITE, send mail to info@sunsite.unc.edu

SunOS UNIX (calypso)

login: swais

you're probably a vt100 or should be
TERM = (unknown) vt100
It takes a minute to load all the database information
```



```
SWAIS                          Source Selection                 Sources: 646
  #           Server                          Source                   Cost
073:    [            archie.au]  archie.au-ls-lRt                          Free
074:    [            archie.au]  archie.au-mac-readmes                     Free
075:    [            archie.au]  archie.au-pc-readmes                      Free
076:    [askhp.ask.uni-karlsr]  ASK-SISY-Software-Information             Free
077:    [       ericir.syr.edu]  AskERIC-Helpsheets                        Free
078:    [       ericir.syr.edu]  AskERIC-Infoguides                        Free
079: *  [       ericir.syr.edu]  AskERIC-Lesson-Plans                      Free
080:    [       ericir.syr.edu]  AskERIC-Minisearches                      Free
081:    [       ericir.syr.edu]  AskERIC-Questions                         Free
082:    [ndadsb.gsfc.nasa.gov]  astropersons                              Free
083:    [ cast0.ast.cam.ac.uk]  astroplaces                               Free
084:    [            archie.au]  au-directory-of-servers                   Free
085:    [     doppler.ncsc.org]  AVS_TXT_FILES                             Free
086:    [         wais.eff.org]  bcs-calendar                              Free
087:    [ndadsb.gsfc.nasa.gov]  BGRASS-L                                  Free
088:    [      wais.fct.unl.pt]  bib-appia                                 Free
089:    [    cirm2.univ-mrs.fr]  bib-cirm                                  Free
090:    [       snekkar.ens.fr]  bib-dmi-ens-fr                            Free

Keywords: puzzles

<space> selects, w for keywords, arrows move, <return> searches, q quits, or ?
```

```
SWAIS                            Search Results                     Items:  5
  #    Score     Source                     Title                       Lines
001: * [1000] (         lessons)  cecmath.06   /ftp/pub/AskERIC/FullText/L   116
002:   [ 700] (         lessons)  cecmath.22   /ftp/pub/AskERIC/FullText/L    90
003:   [ 300] (         lessons)   Math-INDEX   /ftp/pub/AskERIC/FullText/    79
004:   [ 200] (         lessons)  cecmath.34   /ftp/pub/AskERIC/FullText/L    97
005:   [ 100] (         lessons)  cecmisc.21   /ftp/pub/AskERIC/FullText/L    74

<space> selects, arrows move, w for keywords, s for sources, ? for help
```

WORLD WIDE WEB

The World Wide Web is a hypertext based program which creates links to resources simply by pointing to a word in the text. These links allow you to browse through information. You navigate through these links using your arrow keys. Use the up and down arrow keys to move through the text. Use the right arrow to follow a link and the left arrow to go back.

Example of a World Wide Web Browser Session:

Step 1. > **telnet ukanaix.cc.ukans.edu**

Step 2. login: **www**

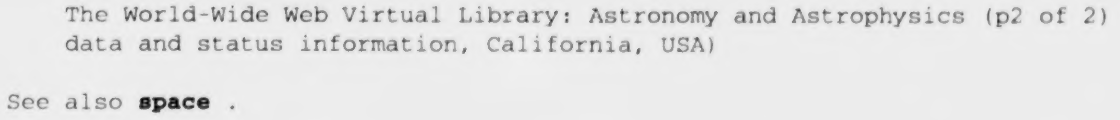
Step 3. The menu below is shown on the screen.
Press the space bar to go to the next page

```
                                          Lynx default home page (p1 of 2)

                    WELCOME TO LYNX AND THE WORLD OF THE WEB

  You are using a WWW Product called Lynx. For more information about
  obtaining and installing Lynx please choose About Lynx

  The current version of Lynx is 2.1.1. If you are running an earlier
  version PLEASE UPGRADE! Lynx version 2.2 is now in Beta.

 INFORMATION SOURCES ABOUT AND FOR WWW
    * For a description of WWW choose Web Overview
    * About the WWW Information Sharing project
    * WWW Information By Subject
    * WWW Information By Type

 OTHER INFO SOURCES
    * University of Kansas CWIS
    * O'Reilly & Ass. Global Network Navigator
    * Nova-Links: Internet access made easy
    * NCSA: Network Starting Points, Information Resource Meta-Index
 Arrow keys: Up and Down to move. Right to follow a link; Left to go back.
   O)ptions P)rint G)o M)ain menu Q)uit /=search [delete]=history list
Type a command or ? for help:                       Press space for next page
```

Step 4. On page 2, use the down arrow key to highlight Astronomy and Astrophysics, then press the right arrow key to link

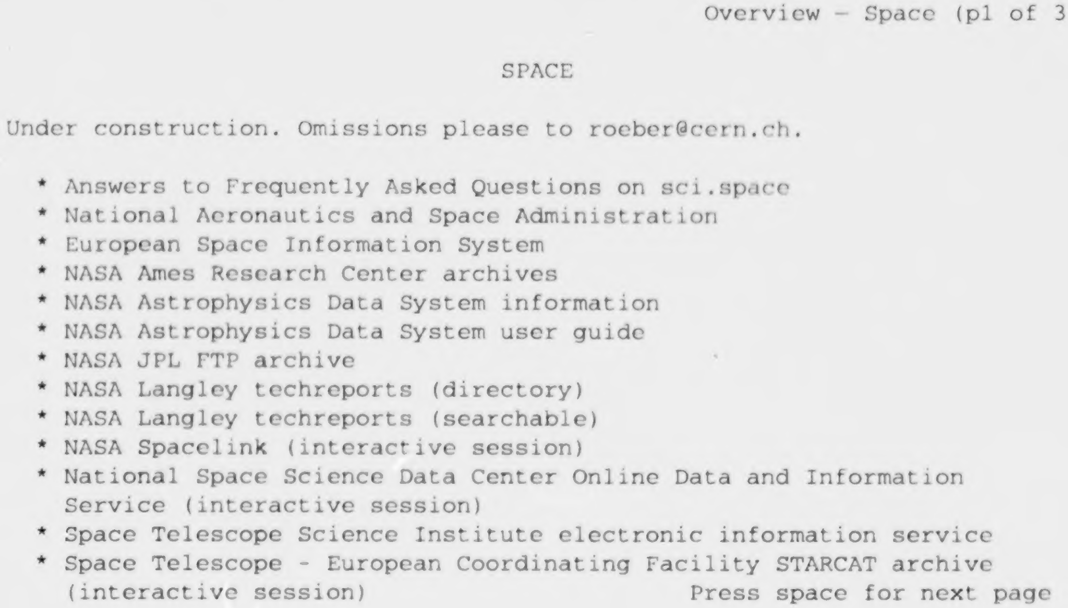
```
                 The World-Wide Web Virtual Library: Subject Catalogue (p2 of 8)
  Archaeology
         Classics and Mediterranean Archaeology

  Astronomy and Astrophysics
         ·Separate list.
```

Step 5. Press the space bar to go to page 2. You will see the text below. Use the down arrow key to highlight space and press the right arrow key to link.

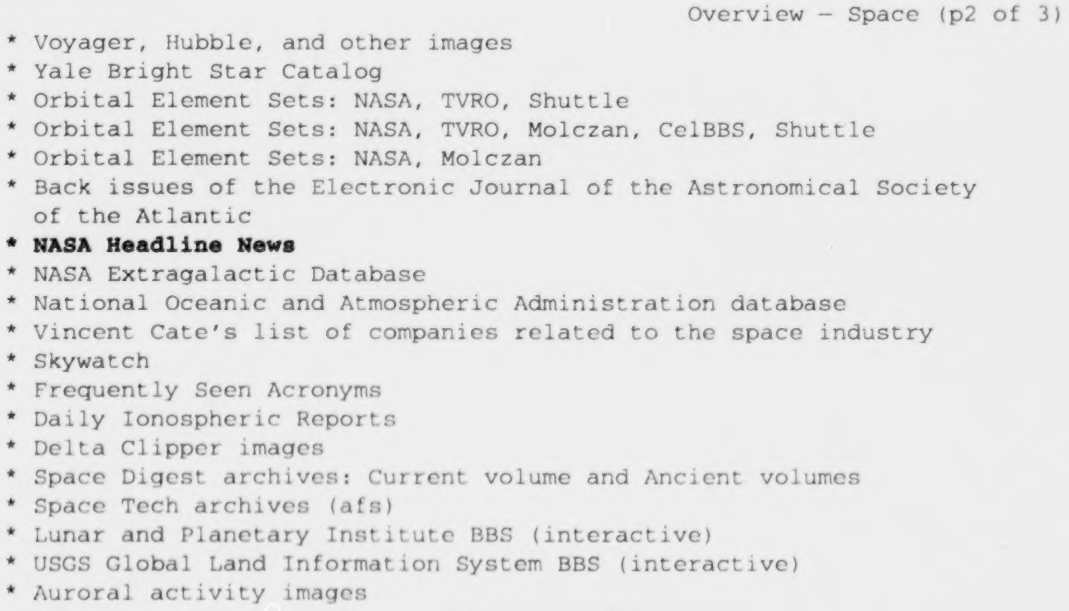


```
       The World-Wide Web Virtual Library: Astronomy and Astrophysics (p2 of 2)
       data and status information, California, USA)

   See also space .
```

Step 6. You will be linked to the screens below. Move the down arrow key to highlight NASA Headline News and press the right arrow key to link.

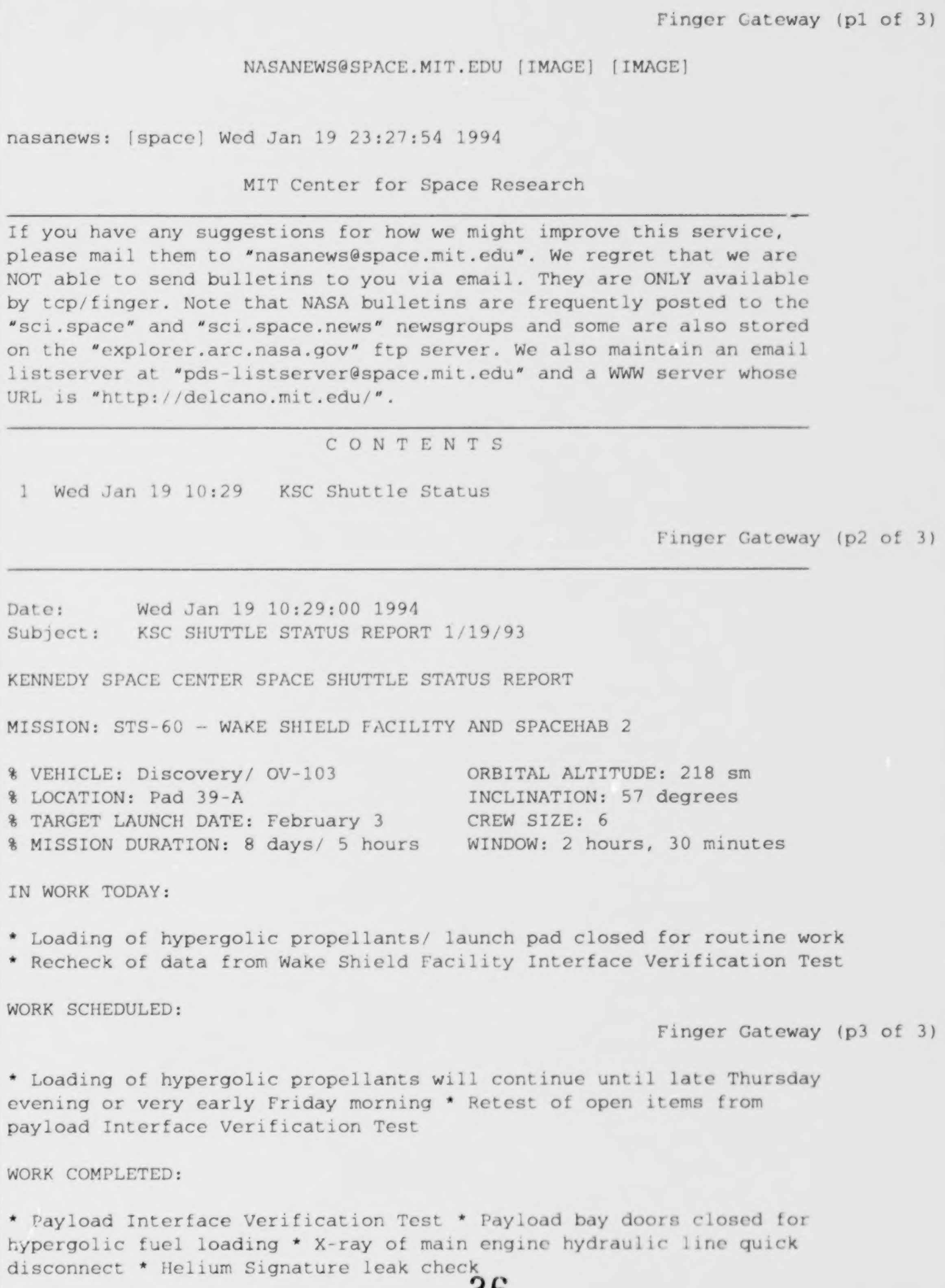


```
                                                     Overview - Space (p1 of 3)

                                             SPACE

   Under construction. Omissions please to roeber@cern.ch.

     * Answers to Frequently Asked Questions on sci.space
     * National Aeronautics and Space Administration
     * European Space Information System
     * NASA Ames Research Center archives
     * NASA Astrophysics Data System information
     * NASA Astrophysics Data System user guide
     * NASA JPL FTP archive
     * NASA Langley techreports (directory)
     * NASA Langley techreports (searchable)
     * NASA Spacelink (interactive session)
     * National Space Science Data Center Online Data and Information
       Service (interactive session)
     * Space Telescope Science Institute electronic information service
     * Space Telescope - European Coordinating Facility STARCAT archive
       (interactive session)                      Press space for next page
```



```
                                                      Overview - Space (p2 of 3)
     * Voyager, Hubble, and other images
     * Yale Bright Star Catalog
     * Orbital Element Sets: NASA, TVRO, Shuttle
     * Orbital Element Sets: NASA, TVRO, Molczan, CelBBS, Shuttle
     * Orbital Element Sets: NASA, Molczan
     * Back issues of the Electronic Journal of the Astronomical Society
       of the Atlantic
     * NASA Headline News
     * NASA Extragalactic Database
     * National Oceanic and Atmospheric Administration database
     * Vincent Cate's list of companies related to the space industry
     * Skywatch
     * Frequently Seen Acronyms
     * Daily Ionospheric Reports
     * Delta Clipper images
     * Space Digest archives: Current volume and Ancient volumes
     * Space Tech archives (afs)
     * Lunar and Planetary Institute BBS (interactive)
     * USGS Global Land Information System BBS (interactive)
     * Auroral activity images
```

Step 7. You will receive information for that date.



```
                                                  Finger Gateway (p1 of 3)

                    NASANEWS@SPACE.MIT.EDU [IMAGE] [IMAGE]


nasanews: [space] Wed Jan 19 23:27:54 1994

                    MIT Center for Space Research
______________________________________________________________________
If you have any suggestions for how we might improve this service,
please mail them to "nasanews@space.mit.edu". We regret that we are
NOT able to send bulletins to you via email. They are ONLY available
by tcp/finger. Note that NASA bulletins are frequently posted to the
"sci.space" and "sci.space.news" newsgroups and some are also stored
on the "explorer.arc.nasa.gov" ftp server. We also maintain an email
listserver at "pds-listserver@space.mit.edu" and a WWW server whose
URL is "http://delcano.mit.edu/".
______________________________________________________________________
                              C O N T E N T S

 1  Wed Jan 19 10:29   KSC Shuttle Status

                                                  Finger Gateway (p2 of 3)
______________________________________________________________________

Date:      Wed Jan 19 10:29:00 1994
Subject:   KSC SHUTTLE STATUS REPORT 1/19/93

KENNEDY SPACE CENTER SPACE SHUTTLE STATUS REPORT

MISSION: STS-60 - WAKE SHIELD FACILITY AND SPACEHAB 2

% VEHICLE: Discovery/ OV-103            ORBITAL ALTITUDE: 218 sm
% LOCATION: Pad 39-A                    INCLINATION: 57 degrees
% TARGET LAUNCH DATE: February 3        CREW SIZE: 6
% MISSION DURATION: 8 days/ 5 hours     WINDOW: 2 hours, 30 minutes

IN WORK TODAY:

* Loading of hypergolic propellants/ launch pad closed for routine work
* Recheck of data from Wake Shield Facility Interface Verification Test

WORK SCHEDULED:
                                                  Finger Gateway (p3 of 3)

* Loading of hypergolic propellants will continue until late Thursday
evening or very early Friday morning * Retest of open items from
payload Interface Verification Test

WORK COMPLETED:

* Payload Interface Verification Test * Payload bay doors closed for
hypergolic fuel loading * X-ray of main engine hydraulic line quick
disconnect * Helium Signature leak check
```

BEST COPY AVAILABLE

ANONYMOUS FTP

Anonymous ftp (file transfer protocol) allows you to transfer files from a remote computer to your account at your host site. Files are stored at the remote site in directories. To gain access to these files, you must initiate an anonymous ftp session and change directories or type the directory path until you reach the file you want to transfer.

There are two types of files which can be transferred, ascii and binary. The default setting is ascii. Suppose you want to transfer the text file, WWII.bib, with a subdirectory path of /pub/research.guides from the Library of Congress. Here are the steps and screen examples for reading and transferring this file.

ASCII File Transfer:

Step 1. At the system prompt > type **ftp** followed by the internet address of the remote ftp site (also called remote host)

example: **ftp ftp.loc.gov**

```
{magnus jdoe 55} ftp ftp.loc.gov
Connected to rs7.loc.gov.
220 rs7 FTP server (Version 4.9 Thu Sep 2 20:35:07 CDT 1993) ready.
```

Once connected you will be asked to type in a user name. The user name is anonymous. The next prompt will ask for a password. The password is your e-mail address. Sometimes the system will accept guest as the password.

Step 2. Name (internet address of the host: userid) **anonymous**
Step 3. Password: **jdoe@magnus.acs.ohio-state.edu or guest**

```
Name (ftp.loc.gov:jdoe): anonymous
331 Guest login ok, send ident as password.
Password:guest
230 Guest login ok, access restrictions apply.
```

Step 4. To see the main listing of what directories or files are on the system, you type dir or ls at the ftp prompt. The ls command lists the names of the files. The dir command gives a more complete description with file type, size, date, and name.

```
ftp> dir
200 PORT command successful.
150 Opening data connection for /bin/ls.
```

A list of other directories and files will be shown on the screen

```
total 40
dr-xr-sr-x   2 root     system        512 Jan 14 14:42 bin
dr-xr-sr-x   2 root     system        512 Jan 14 14:47 etc
dr-xr-sr-x   2 root     system        512 Jan 14 14:42 lib
```

```
drwxrwsr-x  20 root      ftpa         512 Jun  2 17:23 pub
dr-xr-sr-x   3 root      system       512 Jan 14 14:42 usr
226 Transfer complete.
305 bytes received in 0.0039 seconds (76 Kbytes/s)
```

Step 5. To find the file, WWII.bib, you must change directories until the file is listed on the screen. To change directories, type cd or the directory path at the ftp prompt. Continue changing directories until you reach the file you want to transfer.

example: ftp> **cd pub**
example ftp> **cd /pub/reference.guides**

Note: To go back up to the previous directory:

At the ftp> type **cd ..** or **cdup**

```
ftp> cd pub
250 CWD command successful.
```

To see the list under this directory type dir.

```
ftp> dir
200 PORT command successful.
150 Opening data connection for /bin/ls.
total 288
```

You will see these directories and files on the screen. Notice that files begin with - and directories begin with **dr**.

```
-rw-rw-r-    1 kell      ftpa       64648 May 25 13:57 INDEX
-rw-rw-r-    1 kell      ftpa        6339 Mar 11 16:20 README
drwxrwsr-x   7 kell      ftpa         512 Mar 28 13:43 client.software
drwxrwsr-x   2 emil      ftpa         512 Mar  7 16:25 collections.services
drwxrwsr-x   7 lbro      ftpa         512 Apr 20 09:40 exhibit.images
drwxrwsr-x   3 edel      ftpa         512 May 11 13:59 flicc
drwxrwsr-x   2 shal      ftpa         512 May 23 11:21 folklife
drwxrwsr-x   2 kell      ftpa         512 Mar 11 10:11 general.info
drwxrwsrwx   2 ldru      ftpa         512 Jun  3 11:18 incoming
drwxrwsr-x   3 ldru      ftpa         512 May 20 14:40 iug
drwxrwsr-x   2 cgia      ftpa         512 Apr 26 08:38 lc.access
drwxrwsr-x   2 rgue      ftpa         512 Mar  7 16:30 lc.classification
drwxrwsr-x   2 larr      ftpa         512 Mar  3 11:44 lc.online
drwxrwsr-x   2 ldru      ftpa         512 May 31 10:31 listproc
drwxrwsr-x   5 ldru      ftpa         512 Jun  2 17:34 nls
drwxrwsr-x   3 kell      ftpa         512 Mar 11 16:08 proceedings
drwxrwsr-x   2 larr      ftpa         512 May  3 14:56 reference.guides
drwxrwsr-x   3 kell      ftpa         512 Mar 11 16:02 utilities
drwxrwsr-x   5 jste      ftpa         512 Mar 11 16:02 viewers
drwxrwsr-x   2 ldix      ftpa         512 Jun  3 12:04 z3950
226 Transfer complete.
1321 bytes received in 0.28 seconds (4.7 Kbytes/s)
```

Since the file, WWII.bib, is not listed, you will need to change directories again.

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This time change the directory to reference.guides.

```
ftp> cd reference.guides
250 CWD command successful.
```

To see the listing type dir.

```
ftp> dir
200 PORT command successful.
150 Opening data connection for /bin/ls.
total 584
```

In this directory you will see the text file, WWII.bib, listed.

```
-rw-rw-r-   1 larr     ftpa        56268 Mar  8 09:29 WWII.bib
-rw-rw-r-   1 larr     ftpa        83140 Mar  3 15:49 brit.govt.docs
-rw-rw-r-   1 tjab     ftpa        22332 May  3 14:56 stars.and.stripes
-rw-rw-r-   1 larr     ftpa        39502 Mar  3 15:49 us.govt.pubs
-rw-rw-r-   1 larr     ftpa        87933 Mar  3 15:49 us.legis.docs
226 Transfer complete.
355 bytes received in 0.012 seconds (30 Kbytes/s)
```

Since the file to be transferred is an ascii text file, you can read the file prior to transferring it to your local site. To read a text file type the following at the ftp prompt.

At the ftp> **get filename |more**

```
ftp> get WWII.bib |more
200 PORT command successful.
150 Opening data connection for WWII.bib (56268 bytes).
226 Transfer complete.
```

Step 6. Now you are ready to transfer the WWII.bib file:

At the ftp> type **get filename**

```
ftp> get WWII.bib
200 PORT command successful.
150 Opening data connection for WWII.bib (56268 bytes).
226 Transfer complete.
local: WWII.bib remote: WWII.bib
57691 bytes received in 3.2 seconds (17 Kbytes/s)
```

Step 7. The file was successfully transferred and you are ready to exit the ftp session. To end an ftp session:

At the ftp> type **bye**

```
ftp> bye
221 Goodbye.
```

Step 8. To list the file at your local site:

At the system prompt> type **ls** or **dir** depending on your local system commands

example: > **ls**

Step 9. To read a transferred text file at you local site:

At the system prompt > type **more filename**

example: > **more WWII.bib**

Binary File Transfer:

To transfer binary files, you must indicate the file type at the ftp prompt. Suppose you want a file, SHARKS.GIF with subdirectory path /images/gif89a/new-photo-uploads located at the Smithsonian ftp site. Here are the step by step instructions and menu screens for transferring this binary file.

Step 1. At the system prompt > type **ftp** followed by the internet address of the remote ftp site (also called remote host)

```
(magnus jdoe 51) ftp photo1.si.edu
Connected to photo1.si.edu.
220 photo1.si.edu FTP server (Version 5.152 Fri May 14 15:21:57 PDT 1993) ready.
```

Once connected you will be asked to type in a user name. The user name is anonymous. The next prompt will ask for a password. The password is your e-mail address. Sometimes the system will accept guest as the password.

Step 2.

```
Name (photo1.si.edu:jdoe): anonymous
331 Guest login ok, send ident as password.
```

Step 3.

```
Password:guest
230 Guest login ok, access restrictions apply.
```

Step 4. To see the listing of what directories or files are on the system, you type dir or ls at the ftp prompt.

```
ftp> dir
200 PORT command successful.
150 Opening ASCII mode data connection for /bin/ls.
total 52
```

A list of other directories and files will be shown on the screen

```
-rw-r-r-      1 root     bin        1358 Oct 23  1992 ALOT-Chapman.txt
drwxr-xr-x    3 root     root        512 Jan 28 18:08 More.Smithsonian.Stuff
-rw-r-r-      1 root     bin        6147 Dec 11  1992 SMITHSONIAN.RULES.TXT
drwxr-xr-x    5 root     bin         512 Feb 14 12:18 apps
d-x-x-x       2 root     root        512 Oct  5  1992 bin
d-x-x-x       2 root     root        512 Jun  1  1993 etc
```

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```
drwxr-xr-x    8 root      root           512 Jun  2 13:15 images
d-x-x-x       8 root      root           512 Jun  7 20:42 pub
d-x-x-x       2 root      bin            512 Oct  5  1992 shlib
-rw-r-r-      1 root      bin           9904 May 16 13:49 smithsonian.photo.info.txt
226 Transfer complete.
679 bytes received in 0.28 seconds (2.4 Kbytes/s)
```

Step 5. To find the file, SHARKS.GIF, you must change directories until the file is listed on the screen. To change directories, type cd or the directory path at the ftp prompt.

```
ftp> cd images

ftp> cd gif89a
250 CWD command successful.

ftp> dir
200 PORT command successful.
150 Opening ASCII mode data connection for /bin/ls.
total 36
drwxr-xr-x    2 root      root          2048 Jun  9 13:11 air-space
drwxr-xr-x    2 root      root          1024 Apr 21 15:22 art
drwxr-xr-x    2 root      root          2560 Jun  9 13:12 new-photo-uploads
drwxr-xr-x    2 root      root          4096 Jun  9 13:09 people-places
drwxr-xr-x    2 root      root          4096 Jun  9 13:11 science-nature
drwxr-xr-x    2 root      root          3584 Jun  9 13:11 tech-history
226 Transfer complete.
414 bytes received in 0.039 seconds (10 Kbytes/s)

ftp> cd new-photo-uploads
250 CWD command successful.

ftp> dir
200 PORT command successful.
150 Opening ASCII mode data connection for /bin/ls.
total 7928
-rw-r-r-    1 root      root       184955 May 26 11:30 2NDDIV.GIF
-rw-r-r-    1 root      root       118832 May 26 11:30 442ND.GIF
-rw-r-r-    1 root      root       140163 May 26 11:30 A4C.GIF
-rw-r-r-    1 root      root       216621 May 26 11:30 AIDS.GIF
-rw-r-r-    1 root      root       138525 May 26 11:30 ALLOSR.GIF
-rw-r-r-    1 root      root       168805 May 26 11:30 ARLTON.GIF
-rw-r-r-    1 root      root       157619 May 26 11:30 BLENNY.GIF
-rw-r-r-    1 root      root       175025 May 26 11:30 BRADLY.GIF
-rw-r-r-    1 root      root       230748 May 18 11:11 GULF.GIF
-rw-r-r-    1 root      root       231940 May 18 11:12 HUBBLE.GIF
-rw-r-r-    1 root      root       199345 May 18 11:12 INDY02.GIF
-rw-r-r-    1 root      root       122627 May 18 11:12 JEFSON.GIF
-rw-r-r-    1 root      root       178995 May 18 11:12 JFKCTR.GIF
-rw-r-r-    1 root      root       180398 May 18 11:12 KBEES.GIF
-rw-r-r-    1 root      root       104998 May 18 11:12 KVULTR.GIF
-rw-r-r-    1 root      root       161852 May 25 13:00 POTTRY.GIF
-rw-r-r-    1 root      root        11457 Jun  8 16:40 REDCLDTP.GIF
-rw-r-r-    1 root      root       116755 May 25 13:00 SAO01.GIF
-rw-r-r-    1 root      root        88381 May 25 13:00 SAO02.GIF
-rw-r-r-    1 root      root       152064 May 25 13:00 SAO03.GIF
-rw-r-r-    1 root      root       152856 May 25 13:00 SAO04.GIF
```

```
-rw-r-r-   1 root      root       127047 May 25 13:00 SA005.GIF
-rw-r-r-   1 root      root       115215 May 25 13:00 SA006.GIF
-rw-r-r-   1 root      root       229769 May 25 13:00 SHARKS.GIF
-rw-r-r-   1 root      root        19710 Jun  8 16:40 SKYLB1TP.GIF
-rw-r-r-   1 root      root        21288 Jun  8 16:40 SLOTHTP.GIF
-rw-r-r-   1 root      root        17915 Jun  8 16:40 SUBTP.GIF
-rw-r-r-   1 root      root        14219 Jun  8 16:40 TBEARTP.GIF
226 Transfer complete.
1850 bytes received in 0.28 seconds (6.5 Kbytes/s)
```

Step 6. To transfer a binary file, you must indicate the file type.

At the ftp> type **binary**

```
ftp> binary
200 Type set to I.
```

Step 7. Now you are ready to transfer the SHARKS.GIF file:

At the ftp> type **get filename**

```
ftp> get SHARKS.GIF
200 PORT command successful.
150 Opening BINARY mode data connection for SHARKS.GIF (229769 bytes).
226 Transfer complete.
local: SHARKS.GIF remote: SHARKS.GIF
229769 bytes received in 7.9 seconds (29 Kbytes/s)
```

Step 8. The file was transferred successfully and you are ready to quit the ftp session.

At the ftp> type **bye**

```
ftp> bye
221 Goodbye.
```

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ARCHIE

Archie allows you to search for files at anonymous ftp sites. The Archie database is updated about once a month. If your own host does not have a menu driven Archie server, telnet to one that does.

ARCHIE STEP BY STEP INSTRUCTIONS:

Step 1. At the system prompt > **telnet to an archie site**
[ex. telnet archie.sura.net]
Step 2. login: **archie** or **qarchie** depending on the host site
Step 3. At the system prompt > **prog filename** [type the keyword]
Step 4. Results of the search will be displayed with a : at the end of each page
At the : **press the space bar** to view the next page of results
Step 5. END **q** [type q to search another filename]
quit [type quit to exit the archie program]

Example of an Archie Search:

```
> telnet archie.sura.net
Trying 128.167.254.195...

SunOS UNIX (yog-sothoth.sura.net)

login: qarchie
Last login: Tue Jan 18 12:06:59 from Husky1.StMarys.C
SunOS Release 4.1.3 (NYARLATHOTEP) #3: Thu Apr 22 15:26:21 EDT 1993

>prog whitehouse
Processing Case Insensitive Substring Search for 'whitehouse'

Host 130.149.17.7

    Location: /pub/amiga/uni-kl/aminet/mods/8voic
           FILE -rw-rw-r-      56541  Apr 26 1993  AtTheWhiteHouse.lha
           FILE -rw-rw-r-       1007  Apr 26 1993  AtTheWhiteHouse.readme

Host life.anu.edu.au

    Location: /pub/general/fun
           FILE -rw-rw-rw-      16105  Jun  8 00:00  whitehouse.faq
```

: [At the prompt, press space bar to view the next page of results]

```
END quit
```

LIST OF ARCHIE SERVERS

The following is a list of other archie servers:

archie.ans.net	147.225.1.10	(ANS server, NY (USA))
archie.au	139.130.4.6	(Australian Server)
archie.doc.ic.ac.uk	146.169.11.3	(United Kingdom Server)
archie.edvz.uni-linz.ac.at	140.78.3.8	(Austrian Server)
archie.funet.fi	128.214.6.102	(Finnish Server)
archie.internic.net	198.49.45.10	(AT&T server, NY (USA))
archie.kr	128.134.1.1	(Korean Server)
archie.kuis.kyoto-u.ac.jp	130.54.20.1	(Japanese Server)
archie.luth.se	130.240.18.4	(Swedish Server)
archie.ncu.edu.tw	140.115.19.24	(Taiwanese server)
archie.nz	130.195.9.4	(New Zeland server)
archie.rediris.es	130.206.1.2	(Spanish Server)
archie.rutgers.edu	128.6.18.15	(Rutgers University (USA))
archie.sogang.ac.kr	163.239.1.11	(Korean Server)
archie.sura.net	128.167.254.195	(SURAnet server MD (USA))
archie.sura.net(1526)	128.167.254.195	(SURAnet alt. MD (USA))
archie.switch.ch	130.59.1.40	(Swiss Server)
archie.th-darmstadt.de	130.83.22.60	(German Server)
archie.unipi.it	131.114.21.10	(Italian Server)
archie.univie.ac.at	131.130.1.23	(Austrian Server)
archie.unl.edu	129.93.1.14	(U. of Nebraska, Lincoln (USA))
archie.uqam.ca	132.208.250.10	(Canadian Server)
archie.wide.ad.jp	133.4.3.6	(Japanese Server)

Client software should be supported at all of these sites.

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FILE MANAGEMENT

Files will often have an extension name attached. Many of these are compressed to save storage space and limit the download time. For example, .tar, .zip, and .sit can contain several small files in one larger file. Compressed files and files other than text will need software to uncompress and run them.

DOS PC Machines:

Files ending in .exe or .com are ready to run simply by typing the name and need no decompression. To uncompress .arc or .zip files, you will need the shareware utility programs PKarc and PKzip by PKWare Inc. PKUNZIP is part of the PKzip package.

PKzip204g.exe
ftp.virginia.edu /pub/pc

Uncompressing a .zip file:

Step 1. Download the zip file into the same directory as PKUNZIP
Step 2. Type PKUNZIP and the name of the downloaded file
Step 3. The file will be uncompressed and you will have a program ready to run

Macintosh Machines:

The commercial software program, Stuffit Deluxe, is one of the best packages for coding, decoding, stuffing, and unstuffing Macintosh files. There are also shareware and freeware programs on the Internet which can be used as well. BinHex is a shareware program for decoding .hqx files. Since many of the Macintosh programs on the Internet are stored in the BinHex format, this is an essential software program. There are three versions of Binhex, Version 4.0, a desk accessory version for 4.0, and Version 5.0. They are available via anonymous ftp.

Binhex1.02.sit.hqx
wuarchive.wustl.edu /systems/mac/umich.edu/system.extensions/da
binhex4.0.bin
archive.umich.edu /mac/util/compression
Binhex_5..sea.hqx
ftp.virginia.edu /pub/mac/misc

To decode a .hqx file follow these steps.

Step 1. Get a .hqx file from an ftp site using **ASCII** file transfer
Step 2. Download the file to your hard drive
Step 3. Double click on the Binhex program [Tip: Make an alias of the program and put it in your Apple Menu. Then simply pull down to the program and it will launch.]
Step 4. Choose Download -> Application under the File Menu
Step 5. Choose the .hqx file and place to save it

Other Macintosh Compression Programs:

compact.pro1.34.sea.hqx
archive.umich.edu /mac/util/compression
stuffitexpander3.0.7.sea.hqx
archive.umich.edu /mac/util/compression

UNIX Machines:

Unix files have the extension .Z attached to the filename. These files can be uncompressed at your host site. You can also compress files to save storage space.

At the system prompt> type **uncompress filename.Z**

example: **uncompress history.Z**
To compress a file to save storage space:

At the system prompt> type **compress filename**

example: **compress history**

After compressing the file, it will have the .Z extension again.

.PS Files

The file extension .ps stands for postscript. This file can contain both graphics and text. It is encrypted to print on a postscript printer. Computer utility programs will send the information to a postscript printer.

GIF Files

GIF (pronounced jif) are universal graphics files. The format was developed by CompuServe to allow the same images to be seen on all types of computers. There are several good software programs for viewing .gif files on the Macintosh, DOS, and Windows platforms. Gifwatcher and Gif Converter are programs for the Macintosh; Showgif and Graphic Workshop are programs for MSDOS; and LVIEW 3.1 and Graphic Workshop for Windows.

gifwatcher2.11.sit.hqx
wuarchive.wustl.edu /systems/mac/umich.edu/systems.extensions/da
gifconverter2.37.cpt.hqx
archive.umich.edu /mac/graphics/graphicsutil

shwgif51.zip
archive.umich.edu /msdos/graphics/util/gif
grfwk70a.zip
archive.umcih.edu /msdos/graphics/util

lview31.zip
archive.umich.edu /windows/graphics
gwswn11j.zip
archive.umich.edu /windows/graphics

One of the largest collections of GIF files can be found at Washington University of St. Louis. Another great site is the Smithsonian Institution.

ftp wuarchive.wustl.edu /multimedia/images/gif
ftp photo1.si.edu /images/gif89a

Guide For File Transfer

File Suffix	**Transfer Type**	**Computer**	**Program**
.bin	binary	Macintosh	executable
.cpt	binary	Macintosh	compact pro
.hqx	ASCII	Macintosh	BinHex
.sea	binary	Macintosh	self-extracting
.sit	binary	Macintosh	unstuffit
.gz	binary	Unix	gunzip
.tar	binary	Unix	tar command
.uue	ASCII	Unix	uudecode command
.Z	binary	Unix	uncompress
.arc	binary	PC	pkarc
.com	binary	PC	executable
.exe	binary	PC	executable
.zip	binary	PC	pkunzip
.gif	binary (graphics)	All	gif viewing programs
.ps	ASCII	All	postscript printer
.txt	ASCII	All	text editor

DOWNLOADING A FILE

Each telecommunications program for computers is slightly different. Refer to your program manual on the specifics. The following are basic instructions for downloading files. There are several file transfer protocols, including Kermit, Xmodem, Ymodem, and Zmodem. Kermit is the slowest and Zmodem the fastest. Zmodem is currently the most common protocol. However, some Unix hosts may only support Kermit.

Downloading A Text File With The Kermit Protocol

Macintosh & MacKermit Telecommunications Program

Step 1. At the system prompt > **kermit**
Step 2. At the kermit prompt > **send filename**
Step 3. when prompted for the receive command, go to the transfer menu and select receive file
Step 4. At the kermit prompt > **quit**

PC & ProComm Telecommunications Program

Step 1. At the system prompt > **kermit**
Step 2. At the kermit prompt > **send filename**
Step 3. when prompted for the receive command, **press PGDn**, type **k** (for kermit) and press return/enter
Step 4. At the kermit prompt > **quit**

example:

```
{magnus jdoe 53} kermit
C-Kermit, 4F(095) 31 Aug 89, VAX/Ultrix
Type ? for help
C-Kermit>send deer
Escape back to your local Kermit and give a RECEIVE command...
C-Kermit> quit
```

example on a VMS system:

```
$ kermit
VMS Kermit-32 version 3.3.128
Default terminal for transfers is: _CCA1110:
Kermit-32>send HUR
Kermit-32>quit
```

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Downloading A Binary File With The Kermit Protocol

Macintosh & MacKermit Telecommunications Program

Step 1. At the system prompt > **kermit**
Step 2. At the kermit prompt > **set file type binary**
Step 3. At the kermit prompt > **send filename**
Step 4. when prompted for the receive command, go to the transfer menu and select receive file
Step 5. At the kermit prompt > **quit**

PC & ProComm Telecommunications Program

Step 1. At the system prompt > **kermit**
Step 2. At the kermit prompt > **set file type binary**
Step 3. At the kermit prompt > **send filename**
Step 4. when prompted for the receive command, press **PGDn**, type **k** (for kermit) and press return/enter
Step 5. At the kermit prompt > **quit**

example on a Unix system:

```
{magnus jdoe 53} kermit
C-Kermit, 4F(095) 31 Aug 89, VAX/Ultrix
Type ? for help
C-Kermit>set file type binary
C-Kermit>send quartz.gif
Escape back to your local Kermit and give a RECEIVE command...
C-Kermit> quit
```

example on a VMS system:

```
$ kermit
VMS Kermit-32 version 3.3.128
Default terminal for transfers is: _CCA1110:
Kermit-32>set file type binary
Kermit-32>send quartz.gif
Kermit-32>quit
```

Downloading With Zmodem Protocol

To transfer a file from the host computer to your Macintosh or PC, you will use the command sz (send Zmodem) followed by either -a (ASCII text file) or -b (binary file).

Step 1. At the system prompt > **sz -a filename**

or

Step 1. At the system prompt > **sz -b filename**

example on a Unix system:

```
> sz -a Hurston.findingaid
```

Either the file will be transferred automatically or a message may appear to receive the file. If the message appears, you must execute the command in your telecommunications program to receive the file.

example on a VMS system:

```
$ sz -a HUR

*z
### Receive (Z) hur: Exists, overwriting
### Receive (Z) hur: 18513 bytes, 1:19 elapsed, 233 cps, 97%
$ .exe;3 3.12 04-11-91 finished.
```

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LISTSERV

A listserv is a discussion group interested in a specific topic. In order to participate in the discussion group, you must subscribe to the listserv group. These are free. The word subscribe simply means you sign up to receive the messages via e-mail. Since hundreds of people subscribe to these groups, the mail can accumulate quite rapidly. So you need to read your mail frequently to keep up with the postings.

LISTSERV SUBSCRIPTION STEP BY STEP INSTRUCTIONS:

Step 1. Within your e-mail program type **m** to initiate e-mail
Step 2. To: **listserv@host**
Step 3. Subject: leave blank
Step 5. Cc: leave blank
Step 6. In the body of the message type: **subscribe listname your name**
Step 7. End mail and send message

ELM: control-e and send
VMS: control-z
Pine: control-x

example:

ELM:

```
> m
> To: listserv@suvm.syr.edu
> Subject:
> Cc:
Body of Message: subscribe lm_net Jane Doe
control-e
s
```

VMS:

```
> MAIL
> m
> To: IN%"listserv@suvm.syr.edu"
> Subject:
> Cc:
Body of Message: subscribe lm_net Jane Doe
control-z
```

Pine:

> **c**
> To: **listserv@suvm.syr.edu**
> Subject:
> Attchmnt:
> Cc:
Body of Message: **subscribe lm_net Jane Doe**
control-x

To leave a discussion group replace subscribe with unsubscribe.

Once you are a subscriber, you will want to post messages for others in the discussion group to read. To post a message which will go to all subscribers, send mail to the discussion group address not the listserv.

example:
> **m**
> To: **lm_net@suvm.syr.edu**
> Subject: (this can be the subject of the message you are sending)
> Cc:
Type your message
end mail program and send

To reply to a message which all subscribers will read simply type **r** and type your message.

To reply to an individual look for their internet address in the message and send e-mail directly to them.

Examples of Educationtional Listservs

ECENET	Early childhood education (0-8 yrs). To subscribe to the list address an e-mail message to: listserv@vmd.cso.uiuc.edu no subject In the body of the message type: Subscribe ECENET your name
EDNET	a forum exploring the educational potential of the Internet To subscribe to the list address an e-mail message to: Listserv@nic.umass.edu No subject

	In the body of the message type: Subscribe Ednet your name
EDPOLYAN	Education Policy Analysis Forum To subscribe to the list address an e-mail message to: listserv@ASUVM.INRE.ASU.EDU No subject In the body of the message type: Subscribe EDPOLYAN your name
EDTECH	Educational technology To subscribe to the list address an e-mail message to: listserv@MSU No subject In the body of the message type: SUB EDTECH your name
IECC	For teachers who want to find partner classrooms for international and cross-cultural electronic mail exchange (not for individual pen pals or for discussion) To subscribe to the list address an e-mail message to: iecc-request@stolaf.edu No subject In the body of the message Subscribe IECC your name
K12ADMIN	K-12 School Administrator Discussion To subscribe to the list address an e-mail message to: listserv@suvm.syr.edu No subject In the body of the message type: Subscribe K12ADMIN your name
KIDCAFE	For kids (10 - 15) who want to communicate with other kids around the world To subscribe to the list address an e-mail message to: listserv@vm1.nodak.edu No subject In the body of the message type: Subscribe KIDCAFE your name

KIDLIT-L	For educators, librarians, researchers, authors, and others interested in literature for children and youths. To subscribe to the list address an e-mail message to: listserv@bingvmb.cc.binghamton.edu No subject In the body of the message type: Subscribe KIDLIT-L your name
KIDSPHERE	To develop an international network for children & teachers To subscribe to the list address an e-mail message to: kidsphere@vms.cis.pitt.edu No subject In the body of the message type: Subscribe kidsphere your name
LM_NET	School Library Media To subscribe to the list address an e-mail message to: LISTSERV@SUVM.SYR.EDU No subject In the body of the message type: Subscribe LM_NET your name
Middle-L	Middle School To subscribe to the list address an e-mail message to: LISTSERV@SUVM.SYR.EDU No subject In the body of the message type: Subscribe middle-l your name
SUPERK12	School networking and telecommunications To subscribe to the list address an e-mail message to: LISTSERV@SUVM.SYR.EDU No subject In the body of the message type: Subscribe SUPERK12 your name
VOCNET	Vocational Education Practitioners To subscribe to the list address an e-mail message to: LISTSERV@cmsa.berkeley.edu No subject In the body of the message type: Subscribe VOCNET your name

NEWS GROUPS

Networks provide literally thousands of discussion groups which can be read using a newsreader. The news groups are organized into seven USENET groups comp, news, rec, sci, soc, talk, and misc. There are other news groups which are similar to USENET, but have different names. These are alt, bionet, bit, biz, de, fi, ieee, gnu, k12, u3b, and vmsnet. There is also Clarinet which is an indexed system of United Press International and syndicated columns. This service is limited to those organizations who contract for the service. There are several UNIX newsreader programs to choose from rn, nn, trn, and tin. Consult your system administrator to see which one is available to you.

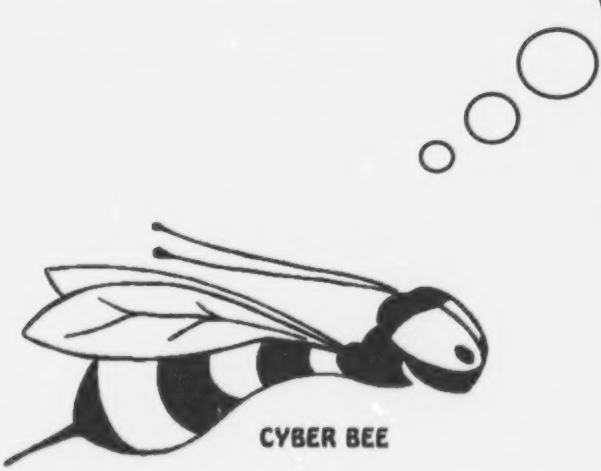
K12NET NEWS GROUPS

Conference Areas Available in K12Net
======================================

Contact your sysop if ALL of these conferences are not available locally as per K12Net policy.

USENET Newsgroup	FidoNet Echo	Description
k12.lang.francais	K12_FRANCAIS	French Conversation
k12.lang.esp-eng	K12_SPAN_ENG	Spanish Conversation
k12.lang.deutsch-eng	K12_GERM_ENG	German Conversation
k12.lang.russian	K12_RUSSIAN	Russian Conversation
k12.lang.art	K12_LANG_ART	Language Arts Education
k12.ed.tag	K12_TAG	Talented and Gifted
k12.ed.art	K12_ART_ED	Art Education
k12.ed.music	K12_MUSIC_ED	Music Education
k12.ed.business	K12_BUS_ED	Business Education
k12.ed.health-pe	K12_HLTH_PE	Health & Physical Education
k12.ed.life-skills	K12_LIF_SKIL	School Counsellors
k12.ed.soc-studies	K12_SOC_STUD	Social Studies Education
k12.ed.tech	K12_TECH_ED	Technical/Vocational Education
k12.ed.science	K12_SCI_ED	Science Education
k12.ed.math	K12_MATH_ED	Math Education
k12.ed.comp.literacy	K12_COMP_LIT	Computer Literacy
k12.ed.special	K12_SPEC_ED	Special Education
k12.chat.teacher	K12.TCH_CHAT	Teacher Chat
k12.library	LIBRARY	Technology in Libraries

INTERNET WORKSHEETS



Chapter 3

E-MAIL WORKSHEET

To send e-mail using the Unix system or ELM type the following:

Step 1.	At the system prompt >	**m** [mail]
Step 2.	To:	**userid@domain**
Step 3.	Subject:	topic for discussion
Step 4.	Cc:	address of a person you want to receive a carbon copy or press return for none
Step 5.	Compose message	
Step 6.	**control-e**, then **s** for send	

The VMS mail system uses a different addressing style:

Step 1.	At the system prompt >	**m**
Step 2.	To:	**IN%"userid@domain"**
Step 3.	Subject:	topic for discussion
Step 4.	Cc:	address of a person you want to receive a carbon copy or press return for none
Step 5.	**control-z**	

Pine e-mail system is menu driven:

Step 1.	At the main menu	**c** for compose and send message
Step 2.	To:	**userid@domain**
Step 3.	Cc:	address of a person you want to receive a carbon copy or press return for none
Step 4.	Attchmnt:	filename to send with the e-mail message
Step 5.	Subject:	type the topic for discussion
Step 6.	**control-x**	

1. Send an e-mail message to yourself, a participant in the class, or the instructor.

2. Which e-mail system did you use?

FINGER WORKSHEET:

FINGER STEP BY STEP INSTRUCTIONS:

Step 1. At the system prompt > **finger userid@host**
[ex. finger ljoseph@magnus.acs.ohio-state.edu]

1. Initiate a finger session from one of the addresses below.

➢ copi@oddjob.uchicago.edu
➢ quake@geophys.washington.edu
➢ nasanews@space.mit.edu
➢ magliaco@pilot.njin.net
➢ aurora@xi.uleth.ca
➢ forecast@typhoon.atmos.colostate.edu

2. Which address did you choose?

3. What kind of information was provided?

GOPHER WORKSHEET:

1. Gopher to one of the sites below.

Step 1. At the system prompt > **gopher internet address**

example: **gopher copernicus.nnb.com**

If you are already using a gopher system, point to the site and press return.

example:

```
-->    1. AskERIIC                                <Directory>
```

Internet Address	**Host**
copernicus.nnb.com	BBN'S
cosn.org	Consortium for School Networking
ericir.syr.edu	AskERIC
gopher.cic.net	CICNet
tiesnet.ties.k12.mn.us	Best of K-12
vienna.hh.lib.umich.edu	Go M-LINK

2. Which site did you choose?

3. List three resources you found at this gopher site.

____

____

____

TELNET WORKSHEET:

GENERAL TELNET STEP BY STEP INSTRUCTIONS:

Before initiating a telnet session make cetain you are at the system prompt.

Step 1.	> **telnet internet address**	[ex. telnet spacelink.msfc.nasa.gov]
Step 2.	login: type the login password	[ex. visitor]
Step 3.	TERM= (unknown) > **VT100**	[terminal emulation]

If your screen freezes or you are unable to exit a telnet host, you can escape.

To escape telnet 1. type **^]** control-right bracket
2. telnet> **q**

There may be other steps depending on whether or not the system requires registration.

1. Initiate a telnet session from one of the addresses below:

➢	spacelink.msfc.nasa.gov	login: NEWUSER password: NEWUSER
➢	cap.gwu.edu	login: guest password: visitor
➢	newton.dep.anl.gov	login: bbs
➢	freenet.carleton.ca	login: guest
➢	chem.ucsd.edu	login: webster
➢	yfn.ysu.edu	login: visitor
➢	astro.temple.edu 12345	
➢	ukanaix.cc.ukans.edu	login: history
➢	marvel.loc.gov	login: marvel

2. Which telnet site did you choose?

3. Give an example of the information that was available at that site?

ANONYMOUS FTP WORKSHEET:

ANONYMOUS FTP SESSION STEP BY STEP INSTRUCTIONS FOR TEXT FILE:

Before initiating an ftp session make cetain you are at the system prompt.

Step 1. > **ftp internet address** [remote host] [ex. ftp ftp.loc.gov]
Step 2. Name (internet address of the host: userid) **anonymous**
Step 3. Password: **your name@host** [ex. jdoe@magnus.acs.ohio-state.edu]
Step 4. ftp> **dir**
Step 5. ftp> **cd directory name** [ex. cd pub] or
ftp> **cd /dir/dir/dir** [ex. cd /pub/research.guides
Step 6. ftp> **get filename** [ex. get WWII.bib]
Step 7. ftp> **bye** [exits remote host ftp site]
Step 8. > **ls or dir** [lists files in your home directory]
Step 9. > **more filename** [view text file on a Unix system]

1. Intiate an ftp session to one of the sites below:

Host cs.dal.ca

Location: /comp.archives/sci.research
FILE -r—r—r— 2374 Sep 15 1991 locating-grants-information

Host grasp1.univ-lyon1.fr

Location: /pub/nfs-mounted/ftp.univ-lyon1.fr/usenet-stats/groups/info
FILE -rw-r—r— 582 Jan 2 16:50 info.nsf.grants

Host ftp.luth.se

Location: /pub/misc/lyrics/folk/t

FILE -rw-r—r— 2509 Oct 22 1992 the_first_of_the_emigrants

Host life.anu.edu.au

Location: /pub/general/fun
FILE -rw-rw-rw- 16105 Jun 8 00:00 whitehouse.faq

```
Host sunsite.unc.edu

  Location: /pub/academic/political-science
    DIRECTORY drwxr-xr-x        512  Jan  4 16:10  whitehouse-healthcare.archive
    DIRECTORY drwxr-xr-x        512  Jan  1 22:06  whitehouse-papers


Host byrd.mu.wvnet.edu

  Location: /pub/history/internet
        FILE -rwxrwxr—      18949  Oct  7 21:14  whitehouse_email.txt
  Location: /pub/yeager
        FILE -rwxrwxr—      16182  Sep  9 10:52  whitehouse.txt


Host nic.sura.net

  Location: /pub/nic
        FILE -rw-r—r—      17797  Jul  7 00:00  whitehouse.FAQ
```

2. Transfer a file from the host to your account

3. What Internet site did you choose?

4. What file did you choose for transfer?

5. Give a brief summary of the information contained in the file.

DIGGING FOR NET NUGGETS

Navigating the Internet can lead to great sources of information which can be utilized in many creative ways with students. Find the answer to each of the following questions making certain to write down the steps or path which led you to it. Have fun digging for those golden net nuggets!

For example:

Where would I find information about Zora Neale Hurston?

Archie search using the word Hurston
anonymous ftp seq1.loc.gov
path: /pub/Library.of.Congress/research.guides/amer.folklife.ctr
file: Hurston.findingaid

1. My students are doing reports on countries. Where would I find general information on population, government, and other statistics?

2. I've heard I can find cookie servers on the network. What are they and where would I find them?

3. Where is Cripple Creek?

4. Whare can I find the daily news about NASA?

5. I would like my students to ask Bruce Coville, author of My Teacher is an Alien some questions. Where can they find him?

6. I desperately need a new lesson plan for teaching current events as well as some video clips to go along with it. Do you have any suggestions?

7. I teach in a French immersion school. I would like my students to find things on Internet using their French language skills. Where could I find a K-12 French gopher?

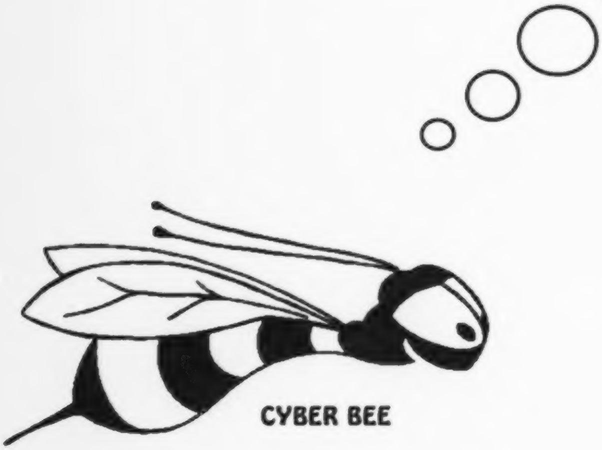
8. The daily drill and practice can get old in my math class. With all the material we are required to cover, I have little time to dream up creative projects. Is there any K-12 network group with project ideas?

9. I plan to initiate a talk session with my friend who lives in Reykjavik, Iceland which is one hour less than Greenwich Mean Time. Where would I find local times for other cities in the world. When would be a good time for us to talk?

10. My students would like to write to Robert Holms at McMurdo Station, Antarctica. What is his e-mail address?

Bonus Question:
Where can I find a list of words for "Welcome" in different languages?

INTERNET RESOURCES



Chapter 4

ARMADILLO, THE TEXAS STUDIES GOPHER

This is truly an innovative venture by the Houston School District. It was designed to support Texas history teachers by using an interdisciplinary method of teaching. Collaboration, multimedia, and accessing the Internet would be used to teach history to middle school students. This gopher as the readme text states will not be static. Educators should explore this network to see how it might apply to their curriculum.

gopher riceinfo.ricr.edu
choose Other Gopher and Information Resources
choose Armadillo

Gopher Path:

World Wide Gophers/
  North American Gophers/
    USA/
      General/
        Texas/
          Armadillo

```
                    Armadillo, the Texas Studies Gopher

 1.  About Armadillo (The Texas Studies Gopher from HISD)        <Text File>
 2.  More About Armadillo and Other Gophers                      <Directory>
 3.  Fact and Fiction About Armadillos                           <Directory>
 4.  Developmental History of Texas Studies Project              <Directory>
 5.  Human Resource Development Opportunities                    <Directory>
 6.  Library Services and Resources                              <Directory>
 7.  Other Gophers and Information Servers with a Texas Twis..   <Directory>
 8.  Super Projects!!!                                           <Directory>
 9.  Technology Help and Multimedia Software and Lessons         <Directory>
 10. **Texas Studies Instructional Information and Resources..   <Directory>
 11. Weather Information                                         <Directory>
 12. What's Happening                                            <Directory>
 13. Search Armadillo by Title (Jughead)                         <Directory>
 14. Work in Progress                                            <Directory>
```

AskERIC

AskERIC contains a wealth of information from timely articles to lesson plans. It is accessible from the gopher system through OhioLink. The following road map leads to AskERIC and other interesting K-12 educational resources.

gopher ericir.syr.edu

Gopher Path:

- World Wide Gophers/
  - North American Gophers/
    - USA/
      - General/
        - AskERIC

```
                AskERIC - (Educational Resources Information Center)

    1.  News and Information about ERIC and AskERIC                    <Directory>
    2.  Map of the Library                                             <Directory>
    3.  Frequently Asked Questions (FAQ's)                             <Directory>
    4.  InfoGuides                                                     <Directory>
    5.  Lesson Plans                                                   <Directory>
    6.  Education Listservs Archives                                   <Directory>
    7.  ERIC Clearinghouses by Subject Area                            <Directory>
    8.  ERIC Digests File                                              <Directory>
    9.  ERIC Bibliographic Database (RIE and CIJE)                     <Directory>
    10. ERIC Full Text Prototype (Experimental)                        <Directory>
    11. Other ERIC Resources                                           <Directory>
    12. Bibliographies                                                 <Directory>
    13. Other Education Resources                                      <Directory>
    14. Education Conferences (Calendars and Announcements)            <Directory>
    15. Professional Organizations                                     <Directory>
    16. Electronic Journals, Books, and Reference Tools                <Directory>
    17. Internet Guides and Directories                                <Directory>
    18. Gophers and Library Catalogs                                   <Directory>
```

AskERIC is... AskERIC is an Internet-based question-answering service for teachers, library media specialists, and administrators. Anyone involved with K-12 education can send an e-mail message to AskERIC. Drawing on the extensive resources of the ERIC system, AskERIC staff will respond with an answer within 48 working hours. If you have questions about K-12 education, learning, teaching, information technology, educational administration - AskERIC at: askeric@ericir.syr.edu

Telnet Connection: ericir.syr.edu login: gopher

BBN'S

The national experimental network for schools contains curriculum resources, lesson plans, pointers to other gophers, and software.

gopher copernicus.nnb.com

Gopher Path:

World Wide Gophers/
    North American Gophers/
        USA/
            General/
                BBN'S

```
                  BBN's National School Network Testbed

 1.  Welcome to BBN's National School Network Testbed          <Text File>
 2.  BBN Internet Server                                       <Text File>
 3.  National School Network Testbed                           <Directory>
 4.  BBN Educational Technology Papers                         <Directory>
 5.  K-12 on the Internet                                      <Directory>
 6.  General information resources                             <Directory>
 7.  Software libraries                                        <Directory>
 8.  AskERIC                                                   <Directory>
 9.  Internet information                                      <Directory>
10.  State resources                                           <Directory>
11.  Federal resources                                         <Directory>
12.  Other Gopher and Information Servers                      <Directory>
13.  Search titles in gopherspace using Veronica               <Directory>
```

```
                     National School Network Testbed

 1.  About BBN's National School Network Testbed               <Text File>
 2.  About BBN's National School Network Testbed (formatted - ..  <Mac HQX>
 3.  BBN Internet Server                                       <Text File>
 4.  Getting the NII to School (text version)                  <Text File>
 5.  Testbed Conference April '93                              <Directory>
 6.  Ralph Bunche School, New York City                        <Directory>
 7.  San Diego City Schools                                    <Directory>
 8.  Shadows Science Project                                   <Directory>
 9.  UCSD InternNet Lesson Plans                               <Directory>
10.  California Dept. of Education - Sacramento                <Directory>
11.  Co-NECT Project (NASDC)                                   <Directory>
12.  MUSEs (Multi-user Simulation Environments) in education   <Directory>
```

BEST OF K-12 - TIESNET OF MINNESOTA

Tiesnet is one of the best places to explore for examples of real world school projects. Wolf Study, Project Central America, and Circumpolar Expedition are a few of the many posted. There are lesson plans, pictures, and sounds to use during the projects. Many of these are still adaptable even if the project has been completed. It is a wonderful demonstration of interactivity among students, teachers, and other professionals involved in the projects.

gopher tiesnet.k12.mn.us

```
                   Best of K-12 Internet Resources (TIES)

1.  AfricaTrek!                                                 <Directory>
2.  Armadillo,Texas environmental, natural and cultural his..   <Directory>
3.  Bosnian/Croatian Exchange Project                           <Directory>
4.  CNN newsroom classroom guide                                <Directory>
5.  Canada's SchoolNet                                          <Directory>
6.  Children, Youth, and Family Consortium Clearinghouse        <Directory>
7.  Current K-12 Information (postings from Selected Ed Lis..   <Text File>
8.  Daily Report Card News Service                              <Directory>
9.  Dallas Museum of Art - Information & Images                 <Directory>
10. Dictionary (Webster Server)                               <Word Search>
11. ENVIROnet (login:ENVIROnet, Password:henniker)                 <Telnet>
12. Education Gopher at Florida Tech                            <Directory>
13. Electronic Books from Project Gutenberg                     <Directory>
14. EnviroLink Network                                          <Directory>
15. Freenet Systems (Source of Academy 1)                       <Directory>
16. Geographic Server                                              <Telnet>
17. Great Lakes Information Network                             <Directory>
18. K12net                                                      <Directory>
19. KIDLINK Gopher                                              <Directory>
20. Map the Monarchs!                                           <Directory>
21. NASA                                                        <Directory>
22. NATIONAL PUBLIC TELECOMPUTING NETWORK(NPTN): Academy On..   <Directory>
23. National Education BBS(NEBBS) & Supercomputer(NESP) Login:..   <Telnet>
24. Newton Educational BBS (Login as cocotext)                     <Telnet>
25. Project Central America                                     <Directory>
26. Reports from McMurdo Station, Antarctica                    <Directory>
27. Russian Far East Exchange                                   <Directory>
28. SELECTED PICTURES,QUICKTIME MOVIES & SOUNDS                 <Directory>
29. Search All White House Information for ...                <Word Search>
30. StarkNet (Stark County School District, Canton, Ohio, U..   <Directory>
31. TEACHER*PAGES (Pennsylvania Department of Education) Login..   <Telnet>
32. THE CIRCUMPOLAR EXPEDITION: May 11-18, 1994                 <Directory>
33. Teacher Contacts                                            <Directory>
34. The Internet Hunt                                           <Directory>
35. The Ralph Bunche School ("The world's first elementary ..   <Directory>
36. The Space Science and Engineering Center (Global Satell..   <Directory>
37. TogetherNet, Foundation For Global Unity                    <Directory>
38. WOLF STUDY PROJECT                                          <Directory>
39. Weather Information & Satellite Data and Images             <Directory>
40. White House Information                                     <Directory>
41. World School for Adventure  Learning: The Journey North..   <Directory>
```

CICNET

The CICNet gopher is a collection of selected Internet resources of interest to K-12 educators, administrators, and students. It was designed by Jeanne Baugh, a professor of computer science at West Virginia University. One of the best features of this gopher is "Internet in the Classroom" which lists project resources including the Internet address, login, logout procedures, and notes about particularly useful files. There are also links to many menu choices.

gopher gopher.cic.net

Gopher Path:

World Wide Gophers/
North American Gophers/
USA/
General/
CICNet

```
                    CICNet Select K-12 Internet Resources

1.  About This Gopher                                          <Text File>
2.  Search This Gopher                                       <Word Search>
3.  Gopher Servers                                             <Directory>
4.  FTP Sites                                                  <Directory>
5.  Telnet Sites                                               <Directory>
6.  Library Catalogs (list maintained by Yale University)      <Directory>
7.  Mailing Lists (listservs)                                  <Directory>
8.  Education-related Publications                             <Directory>
9.  Internet in the Classroom                                  <Directory>
10. FYI (K-12 networking Q&A and miscellaneous information)    <Directory>
11. If You're Not Sure Where to Start                          <Text File>
```

CoSN

The Consortium for School Networking is a membership organization of institutions formed to further the development and use of computer network technology in K-12 education.

CoSN Membership
P.O. Box 8387
Berkeley, CA 94707-8387

CoSN has also created a gopher system designed to support K-12 education. Some examples of the resources available via this gopher are CNN, Discovery Network, National Public Telecomputing Network, access to local and state networks; discussion groups and information about educational projects and other service providers.

gopher cosn.org

Gopher Path:

World Wide Gophers/
    North American Gophers/
        USA/
            General/
                Consortium for School Networking

```
                 Consortium for School Networking (COSN)

1.  Acknowledgments                                          <Text File>
2.  A Disclaimer - Important!                                <Text File>
3.  CoSN Gopher Welcomes You!                                <Directory>
4.  CoSN Logo.gif                                              <Picture>
5.  CoSN Information                                         <Directory>
6.  CoSN Activities                                          <Directory>
7.  Networking Information                                   <Directory>
8.  Policy & Legislation                                     <Directory>
9.  Resources on the Network                                 <Directory>
10. State and Local Network Projects                         <Directory>
11. Educational Conferences                                  <Directory>
12. Related Organizations                                    <Directory>
```

EISENHOWER NATIONAL CLEARINGHOUSE

The Clearinghouse is funded by the Eisenhower National Program for Mathematics and Science Education in the Office of Educational Research and Improvement (OERI), U.S. Department of Education. The goal is to design an electronic catalog of materials that will:

- provide convenient access to services
- offer a wide variety of useful resources to meet various needs
- enable wise choices among the many options available

A variety of resources will be listed in the Clearinghouse catalog for teachers who want to construct lesson plans. Included in this database will be printed lesson plans, modules, curricula, and nonprint materials such as videotapes, software, optical disks, and interactive resources. The ENC catalog will also include reference to the standards set forth by the National Council for Teachers of Mathematics.

This ambitious project promises to enable teachers to make sound decisions when selecting items to use from the catalog. Quality indicators will be attached to the descriptions, including reviews, awards received, field testing, evaluative research articles, and comments received from users.

gopher galileo.enc.org

FTP Connection: ftp galileo.enc.org
When connected login: anonymous
Password: your internet e-mail address
Type **dir** to see the directory listing

Documents are also available by writing or calling:

Gail Hoskins
Eisenhower National Clearinghouse
The Ohio State University
1929 Kenny Road
Columbus, Ohio 43210-1079
(614) 292-7708 or (614) 292-7784
ghoskins@enc.org

Gopher Path:

World Wide Gophers/
North American Gophers/
USA/
General/
Eisenhower National Clearinghouse

EMPIRE SCHOOLHOUSE

The Empire Internet Schoolhouse is provided by the New York State Education and Research Network (NYSERNET) as part of their "bridging the gap program." Through this endeavor collaboration and partnerships can be built in the educational community by sharing resources and ideas. This will be a step toward meeting the needs of teachers and students at all levels. Empire Internet Schoolhouse provides a selection of K-12 resources, projects and discussion groups from every corner of the Internet community. telnet nysernet.org login: empire

Gopher Path:

World Wide Gophers/
    North American Gophers/
        USA/
            New york/
                New York State Education & Research.../
                    School Collections K-12/
                        Empire Internet Schoolhouse

```
Welcome to the Empire Internet Schoolhouse!
(formerly Liberty-High)
                                   ________
                                  /         |
                                 /    THE   |
                                / EMPIRE    |
                ______________/ INTERNET   |
               /               SCHOOLHOUSE  |
              /   A NYSERNet                |
             | Bridging the Gap Project     |
             |______________________        |
                                    \       |
            Sponsored in part by     \      |
            funding from:             \_____|____
                                            \_____\

            The IBM Corporation
            The New York State Science and Technology Foundation
            The National Science Foundation

                  Welcome to the Empire Internet Schoolhouse!

      1.  About the Empire Internet Schoolhouse.
      2.  Assembly Hall for Projects and Discussions/
      3.  Library & Internet Reference Tools/
      4.  Academic Wings/
      5.  School Reform and Technology Planning Center/
      6.  Field trips to other school systems/
      7.  ADAPT-IT ON-LINE WORKSHOP.
      8.  Career and Guidance Office/
      9.  Directory Services and Contacts Center/
      10. Electronic suggestion box (send email to Empire's admin staff.. <TEL>
      11. The Grants Center/
```

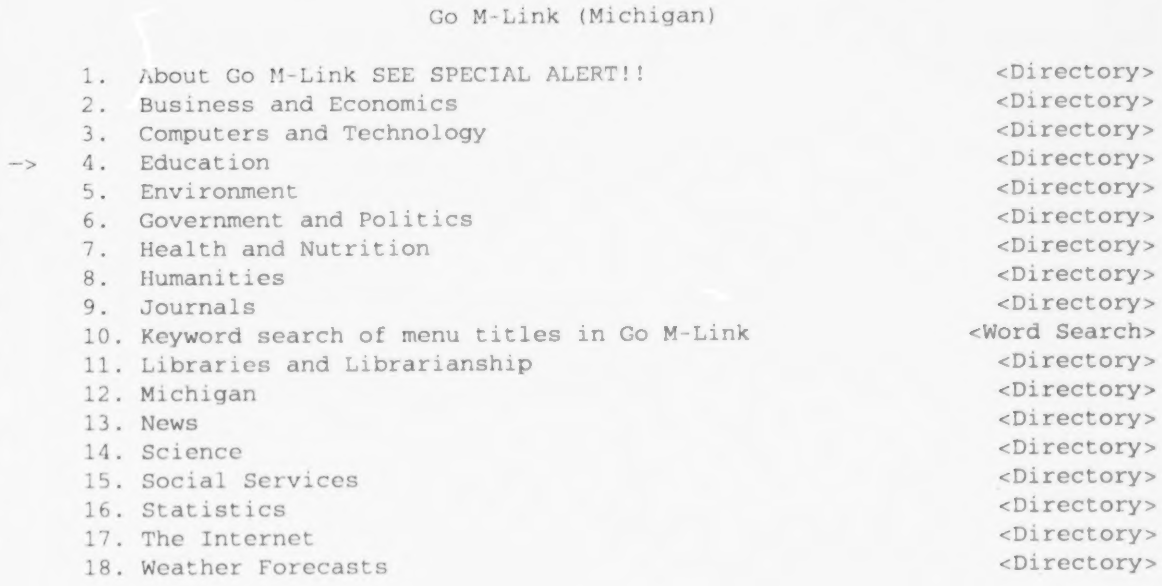
GO M-LINK

Go M-Link is a menu driven system which will lead the user to many resources, particularly strong in the K-12 education area. CNN News lesson plans, AskERIC, and Free-nets are only a few of the many offerings which can be found by going through the menu screens.

gopher vienna.hh.lib.umich.edu

Gopher Path:

World Wide Gophers/
    North American/
        USA/
            Michigan/
                Go-M-Link (Michigan)/
                    Education



```
                        Go M-Link (Michigan)

     1.  About Go M-Link SEE SPECIAL ALERT!!                <Directory>
     2.  Business and Economics                             <Directory>
     3.  Computers and Technology                           <Directory>
-->  4.  Education                                          <Directory>
     5.  Environment                                        <Directory>
     6.  Government and Politics                            <Directory>
     7.  Health and Nutrition                               <Directory>
     8.  Humanities                                         <Directory>
     9.  Journals                                           <Directory>
     10. Keyword search of menu titles in Go M-Link       <Word Search>
     11. Libraries and Librarianship                        <Directory>
     12. Michigan                                           <Directory>
     13. News                                               <Directory>
     14. Science                                            <Directory>
     15. Social Services                                    <Directory>
     16. Statistics                                         <Directory>
     17. The Internet                                       <Directory>
     18. Weather Forecasts                                  <Directory>
```

GREATER COLUMBUS FREE-NET

Some of the more intriguing places to visit on the Internet are the free-nets. They are community based resource networks. You can view and retrive information posted by many different organizations such as city governments, libraries, schools, and other providers. The Greater Columbus Free-Net is an example of one of these community based bulletin boards. The free-nets are set up similar to National Public Radio and Television. Registration is free, but they rely on community support and donations to continue operation. Modem access numbers are available in the local free-net community. Others who have Internet access can telnet or gopher to the free-net over the network.

Greater Columbus Free-Net:

telnet freenet.columbus.oh.us login: guest

Dial-Up Connection:

The modem settings are 8 data bits, 1 stop bit, and no parity. Terminal emulation should be VT100. Baud rates up to 14.4 are supported by the system. The telephone number is 292-7501.

1. Dial Greater Columbus Free-Net
2. Login: type your username and press enter
3. Password: type your password and press enter.
4. Press your backspace or delete key to tell the system which key you prefer to use to correct typing errors
5. VT100; press enter to continue

```
        Columbus Free-net Gopher 2.0 p16


  1. Administration (accounts, help, etc)
  2. Mail Services
  3. Social and Community Service Center
  4. Business Center
  5. Libraries and Information Resources
  6. Health Services and Information
  7. Government Center
  8. Education Center
  9. News, Weather, and Calendar
 10. Special Interest Groups
 11. Other Internet Information Services
```

FREE-NET CONNECTIONS

Gopher Path:

World Wide Gophers/
North American/
USA
General/
Consortium for Scool Networking/
State and Local Network.../
Freenets and Community Networks

Big Sky Telegraph - Dillon, Montana
Internet: 192.231.192.1
login: bbs

Buffalo Free-Net - Buffalo, New York
Internet: freenet.buffalo.edu
login: freeport

CapAccess - Washington, D.C.
Internet: 128.164.140.32
login: guest password: visitor

CIAO Free-Net - Trail, British Columbia, Canada
Internet: 142.231.5.1
login: guest

Cleveland Free-Net - Cleveland, Ohio
Internet: freenet-in-a.cwru.edu
login: Select #2 at first menu

Columbia Online Information Network (COIN) - Columbia, Missouri
Internet: bigcat.missouri.edu
login: guest

Dayton Free-Net - Dayton, Ohio
Internet: 130.108.128.174
login: visitor

Denver Free-Net - Denver, Colorado
Internet: freenet.hsc.colorado.edu
login: guest

Heartland Free-Net - Peoria, Illinois
Internet: heartland.bradley.edu
login: bbguest

Lorain County Free-Net - Elyria, Ohio
Internet: freenet.lorain.oberlin.edu
login: guest

National Capital Free-Net - Ottawa, Canada
Internet: freenet.carleton.ca
login: guest

Prarienet - Champaign-Urbana, Illinois
Internet: prarienet.org
login: visitor

Tallahassee Free-Net - Tallahassee, Florida
Internet: freenet.fsu.edu
login: visitor

Victoria Free-Net - Victoria, British Columbia, Canada
Internet: freenet.victoria.bc.ca
login: guest

Youngstown Free-Net - Youngstown, Ohio
Internet: yfn.ysu.edu
login: visitor

For Information on NPTN Contact:
National Public Telecomputing Network
P.O. Box 1987
Cleveland, Ohio 44106
Voice: 216-247-5800
FAX: 216-247-3328
e.mail: info@nptn.org
anonymous ftp site at: nptn.org
cd /pub/nptn/info.nptn)

LC MARVEL

Bibliographic research guides, access to the Library of Congress Catalog, online exhibits, and a calendar of events are a few of the resources available. Especially interesting are the online exhibits which contain text and GIF image files about artifacts which were on display at the facility. Currently available are 1492, African Mosaic, the Dead Sea Scrolls, the Soviet Archives, and the Vatican.

gopher marvel.loc.gov

Gopher Path:

World Wide Gophers/
  North American Gophers/
    USA/
      Washington D C/
        Library of Congress (LC MARVEL)

```
                      Library of Congress (LC MARVEL)

1.  About LC MARVEL                                         <Directory>
2.  Events, Facilities, Programs, and Services              <Directory>
3.  Research and Reference (Public Services)                <Directory>
4.  Libraries and Publishers (Technical Services)           <Directory>
5.  Copyright                                               <Directory>
6.  Library of Congress Online Systems                      <Directory>
7.  Employee Information                                    <Directory>
8.  U.S. Congress                                           <Directory>
9.  Government Information                                  <Directory>
10. Global Electronic Library (by Subject)                  <Directory>
11. Internet Pesources                                      <Directory>
12. What's New on LC MARVEL                                 <Directory>
13. Search LC MARVEL Menus                                  <Directory>
```

MURDOCK EDUCATIONAL MULTIMEDIA FILE SERVER

As the name implies, this gopher server was designed for sharing multimedia files. Two examples are photographs from the Zaire exhibit and the 1994 Iditarod.

gopher davinci.vancouver.wsu.edu

World Wide Gophers/
North American Gophers/
USA/
General/
Consortium for School Networking/
Resources on the Network/
Educational Resources/
Murdock Educational Multimedia

```
                 Murdock Educational Multimedia File Server

     1.  * HyperReport_README.
     2.  * Retrieving-HQX-Files.
     3.  * RetrievingTextFiles.
     4.  ** HR-Equip-Requirements.
     5.  Articles/
     6.  CompressionTools/
     7.  HR-Process-Samples/
     8.  HR-Tools&Instructions.sit <HQX>
     9.  Iditarod'94/
     10. Interesting Gopher sites/
     11. InternetInfo/
     12. KidsStuff/
     13. Site Index <?>
     14. Site Index <?>
     15. ZaireMuseum/
```

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NASA SPACELINK

NASA Spacelink is a collection of NASA information and educational materials stored on a computer at the Marshall Space Flight Center in Huntsville, Alabama. It is a menu driven program and easy to follow the screen directions. Type NEWUSER as your login and NEWUSER as your password the first time you connect to the system.

telnet spacelink.msfc.nasa.gov

Gopher Path:

World Wide Gophers/North American Gophers/USA/General/
CICNet/
Telnet Sites/
NASA SpaceLink

The first time you logon you will be given an introduction and instructions for registering. When asked for a permanent user name and password, pick something you will be able to remember like the name of your school or library.

```
NASA/SPACELINK     MENU SYSTEM      Revision:1.68.00.00  [@TCON8 NETWORK]

NASA Spacelink Main Menu

1.   Log Off NASA Spacelink

2.   NASA Spacelink Overview
3.   Current NASA News
4.   Aeronautics
5.   Space Exploration: Before the Shuttle
6.   Space Exploration: The Shuttle and Beyond
7.   NASA and its Centers
8.   NASA Educational Services
9.   Instructional Materials
10.  Space Program Spinoffs/Technology Transfer

11.  LIVE FROM...OTHER WORLDS (Interactive Program for Teachers and Students)

Enter an option number, 'G' for GO TO, ? for HELP, or
  press RETURN to redisplay menu...
```

NEWTON

The U.S. Department of Energy's Argonne National Laboratory has a free nationwide bulletin board service for students and teachers. One of the main features of the service is "Ask a Scientist." Teachers or students can leave questions which will be answered by scientists. There are also areas for sharing classroom ideas, calendar of conferences, and E-Mail.

telnet newton.dep.anl.gov login: bbs

Gopher Path:

World Wide Gophers/North American Gophers/USA/General/
    CICNet/
        Telnet Sites/
            Newton

```
                 Welcome to Argonne National Laboratory's
                    Division of Educational Programs.

                       To login to the BBS,
                    PLEASE USE OUR NEW LOGIN OF
                             'bbs'



[[ Main Menu ]]
Argonne National Laboratory's NEWTON BBS


1) System  2) Personal  3) Group  4) TeachingTopics  5) SignOff  > 4

                                    _________________________
                                    TeachingTopics
                                    1. AskAScientist - Info
                                    2. AskAScientist - Answers
                                    3. AskAScientist - Questions
                                    4. AskAScientist - Archive
                                    5. Teachers - Menu I
                                    6. Teachers - Menu II
                                    7. System Info & Comments
                                    8. Argonne Program Info.
                                    9. Introduce Yourself
                                    10. Telnet NASA
                                    11. Telnet Weather Info
                                    12. System Test Programs
                                    _________________________
                                    >
```

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NORTHWEST OHIO COMPUTER ASSOCIATION K-12 GOPHER SERVER

The Northwest Ohio Computer Association (NWOCA), a regional support agency of the Ohio Education Computer Network (OECN), announced their new gopher system. It was designed to be appropriate for use by K-12 students. Access is limited to resources deemed appropriate for minors. This server has one of the best reference sections for education. Along with a great search system for the CIA World Fact Book, it has the Geographic Name Server, and Local Times Around the World.

`gopher nwoca7.nwoca.ohio.gov`

Gopher Path:

World Wide Gophers/
    North American Gophers/
        USA/
            Ohio Gophers/
            NWOCA\OECN K-12 Student Gopher Server

```
                   NWOCA\OECN K-12 Student Gopher Server

1.  About the OECN Gopher Server                                 <Text File>
2.  How to Obtain Changes to This Gopher Server                  <Text File>
3.  Government Center                                            <Directory>
4.  Library Center                                               <Directory>
5.  Local Time and Temperature (Toledo, Ohio USA)                <Text File>
6.  NWOCA Electronic Mail Address Listing (Internet Format)      <Text File>
7.  Ohio Department of Education (ODE) Resources                 <Directory>
8.  Other Information Resources                                  <Directory>
9.  Reference Center                                             <Directory>
10. School House                                                 <Directory>
11. Weather Center                                               <Directory>
```

```
                       Other Information Resources

1.  Airline Reservation Telephone Numbers                        <Text File>
2.  Almanac and Sports Schedule (U. Chicago)                     <Text File>
3.  American Chemical Society Books Catalog                      <Directory>
4.  Automobile Rental Reservation Telephone Numbers              <Text File>
5.  Billboard Top 10 Lists (RPI)                                 <Text File>
6.  Calendars                                                    <Directory>
7.  Hotel Reservation Telephone Numbers                          <Text File>
8.  International Telephone Country/City Dialing Codes           <Text File>
9.  NFL Scores and Standings (Wicat Systems, Utah)               <Text File>
10. Network and Technical Resources                              <Directory>
11. Nielson TV Ratings                                           <Text File>
12. Professional Sports Schedules                                <Directory>
13. Recipes                                                      <Directory>
14. Recipes Database Search                                    <Word Search>
```

PUBLIC BROADCASTING SERVICE (PBS)

The focus of this server will be the dissemination of study guides, teachers's guides, licensing information, and other materials based on the PBS programming schedules.

```
   o&&&&&&&&&&&   "&&      &&&&&&&&&&o&&&&&&&&&&o   o&&&&&&&
 o&&&&&&&&&&&&&&   &&&     "&&&""""&&&""&&&"""&&&o &&&" "&&&
o&&&&&&&&&&&&&&&&  "&&&     &&&     &&  &&&    &&& &&&   """
o&&&&&&&&&&    &&&  "&&&    &&&    o&&  &&&ooo&&"  "&&&oo
o&&&&&&&&&&oooo&&&&  "&&&   &&&&&&&&&&  &&&&&&&&oo    "&&&&&o
 &&&&&&&&&&&&&&&&"""oo&&    &&&         &&&    &&& ooo   &&&&
  &&&&&&&&&&&&&&&   &&&&   o&&&oo     oo&&&oooo&&& &&&o o&&&"
    ""&&&&&&&&&&"  o&&&    &&&&&&     &&&&&&&&&&&  &&&&&&&&"
      &&&&&&&&   &&&                                   ""
      &&&&&&&&   &&&              "TV WORTH WATCHING"
      """"""""   """
```

gopher gopher.pbs.org

Gopher Path:

World Wide Gophers/
        North American Gophers/
                USA/
                        General/
                                Public Broadcasting Service (PBS) Gopher

```
                    Public Broadcasting Service (PBS) gopher

1.  Welcome to the Public Broadcasting Service gopher serve..   <Text File>
2.  About the PBS gopher server                                 <Text File>
3.  Adult Learning Service (Telecourses)                        <Directory>
4.  Adult Learning Satellite Service (ALSS)                     <Directory>
5.  The Business Channel (TBC)                                  <Directory>
6.  K-12 Learning Services                                      <Directory>
7.  PBS MATHLINE                                                <Directory>
8.  PBS ONLine                                                  <Directory>
9.  Other Gopher and Information Servers                        <Directory>
10. PBS Video                                                   <Directory>
11. ~PBS CS Operations Gopher Server (PBS Users Only)           <Directory>
```

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SCHOOLNET

SchoolNet is an educational networking initiative of Industry and Science Canada. Anyone with Internet access is free to use SchoolNet. Schools are asked to register so that they will be able to make use of all the resources available. SchoolNet provides areas for discussion and information access in both French and English.

For more information of SchoolNet, please contact:

National SchoolNet Office or
Industry Canada
Room 805F
235 Queen Street
Ottawa, Ontario
Canada
K1A 0H5

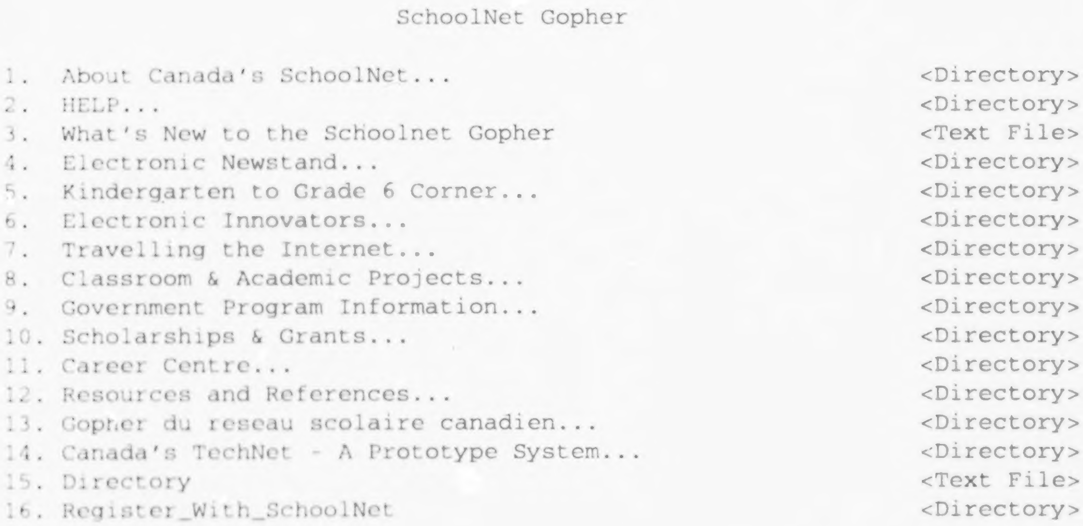
Freenet Science and Engineering
Consulting Group
(SchoolNet Support and Development)
e-mail: schoolnet-admin@ccs.carleton.ca

English: tel: (613) 991-6057
French: tel (613) 998-7166

gopher ernest.ccs.carleton.ca 419 [English Language Gopher]
gopher ernest.ccs.carleton.ca 415 [French Language Gopher]

Gopher Path:

World Wide Gophers/
    North American Gophers/
        Canada/
            Schoolnet



```
                          SchoolNet Gopher

 1.  About Canada's SchoolNet...                              <Directory>
 2.  HELP...                                                  <Directory>
 3.  What's New to the Schoolnet Gopher                       <Text File>
 4.  Electronic Newstand...                                   <Directory>
 5.  Kindergarten to Grade 6 Corner...                        <Directory>
 6.  Electronic Innovators...                                 <Directory>
 7.  Travelling the Internet...                               <Directory>
 8.  Classroom & Academic Projects...                         <Directory>
 9.  Government Program Information...                        <Directory>
10.  Scholarships & Grants...                                 <Directory>
11.  Career Centre...                                         <Directory>
12.  Resources and References...                              <Directory>
13.  Gopher du reseau scolaire canadien...                    <Directory>
14.  Canada's TechNet - A Prototype System...                 <Directory>
15.  Directory                                                <Text File>
16.  Register_With_SchoolNet                                  <Directory>
```

SMITHSONIAN INSTITUTION

The Smithsonian Institution offers a tremendous library of GIF images from their museum collections. GIF files were created by CompuServe to be read universally by all computers. Text files describing the photographs are also available. These images can be transferred using anonymous ftp and then downloaded to your hard drive. Software for viewing these pictures can also be transferred and downloaded.

ftp photo1.si.edu
Image Path: /images/gif89a
Text Path: /smithsonian.photo.info.txt

```
ftp> cd /images/gif89a
250 CWD command successful.
ftp> dir
200 PORT command successful.
150 Opening ASCII mode data connection for /bin/ls.
total 34
drwxr-xr-x   2 root     root        2048 Feb 24 19:38 air-space
drwxr-xr-x   2 root     root        1024 Feb 14 12:23 art
drwxr-xr-x   2 root     root        2048 Feb 24 19:38 new-photo-uploads
drwxr-xr-x   2 root     root        4096 Feb 14 15:19 people-places
drwxr-xr-x   2 root     root        3584 Feb 24 19:38 science-nature
drwxr-xr-x   2 root     root        3584 Feb 24 19:38 tech-history
226 Transfer complete.
414 bytes received in 0.035 seconds (12 Kbytes/s)
```

The Smithsonian also maintains a Natural History gopher system full of information about science.

gopher nmnhgoph.si.edu

Gopher Path:

World Wide Gophers/
North American Gophers/
USA/
Washington D C/
Smithsonian Institution's Natural History

```
                  OhioLINK: Ohio Library and Information Network

                 Smithsonian Institution's Natural History Gopher

      1.  About the Smithsonian Institution's Natural History Gop..  <Text File>
      2.  Department of Botany at the Smithsonian Institution        <Directory>
      3.  Vertebrate Zoology at the Smithsonian Institution          <Directory>
      4.  Invertebrate Zoology at the Smithsonian Institution        <Directory>
      5.  Laboratory of Molecular Systematics                        <Directory>
      6.  Other Biological Gophers                                   <Directory>
```

SPACEMET

SpaceMet is a free multiuser network operated by the University of Massachusetts in Amherst. The empasis of this bbs is on science, environmental issues, education, computers, and K12Net conferences. Information is shared worldwide with over 400 school bulletin board systems. There are text files, lesson plans, and a searchable database of science information. The opening menu is a treasure in and of itself. It features a welcome message giving the time and date, birthdays of famous people, historical timeline, and thought for the day. USA Today headlines can be found in the bulletin menu. This is a network worth exploring.

telnet spacemet.phast.umass.edu   hit the return key to start program

Gopher Path:

World Wide Gophers/North American Gophers/USA/General/
    CICNet/
        Telnet Sites/
            Spacemet Internet

```
Welcome to SpaceMet Internet, brought to you by
   Department of Physics and Astronomy, University of Massachusetts, Amherst
   Five Colleges, Inc., National Science Foundation and MassNet
=============================================================
DEDICATED TO SERVING MASSACHUSETTS K-12 TEACHERS AND STUDENTS
=============================================================
SYSOP (SYStem OPerator): Helen Sternheim  (413) 545-3697, 545-1908

New Users:  Enter your REAL FIRST AND LAST NAMES to apply for a full access
    account.   Enter GUEST (first name) and leave the last name blank to
    just look around with limited access.

This is the BULLETIN MENU
 (to return here later, enter B in Main Menu)

***BayState Medical Center*** Public Health Calendar - area HC
   Public Health Info - area HI, Health Forum - area HF

Select one of these:
   U) USA Today News
   W) *** UMassK12 Internet BBS Workshops(Dec, Jan and Feb)
     -  A new Internet BBS for Massachusetts K12 Educators and Students -
   5) Five College/WMass Public School Partnership Events
   F) Five College Calendar of Events
   D) 5C/5E 1993-1994 Meeting Schedule
   T) Telephone Numbers for SpaceMet BBS
   A)ppeal for SpaceMet Monetary Contributions
   C)urrent workshops, courses, lectures, etc.
   R)edisplay Bulletin Menu
   Q)uit (go to the Main Menu)

Select (R=Redisplay Bulletin Menu, Q=Go to Main Menu): q
```

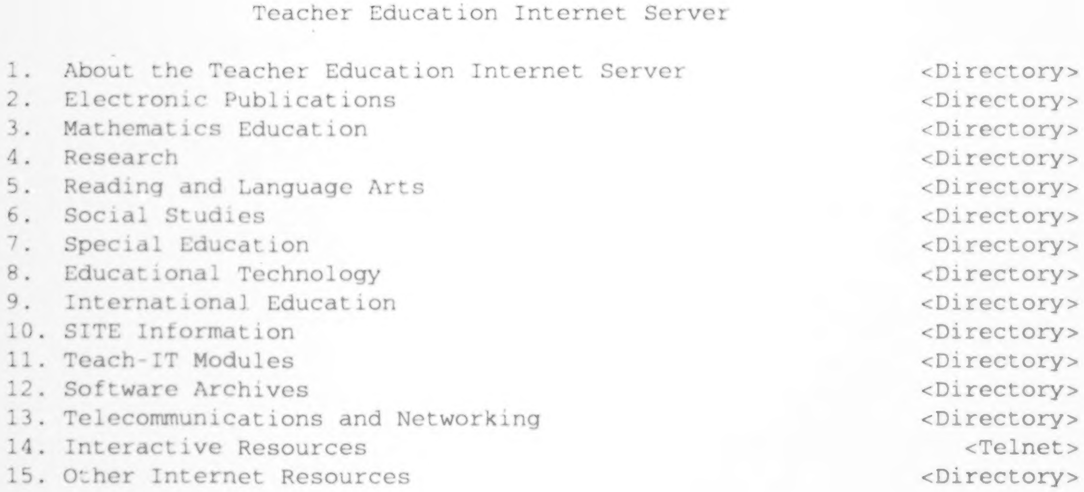
TEACHER EDUCATION INTERNET SERVER

The Teacher Education Internet Server was created by the University of Virginia and the University of Houston. It was established to explore ways in which the Internet could benefit teacher education programs around the world. Users can participate in discussions, download self-instructional modules, and access electronic versions of *Ed-Tech Review* and *Technology and Teacher Education Annual.*

telnet state.virginia.edu login: gopher

Gopher Path:

World Wide Gophers/
    North American Gophers/
        USA/
            Virginia/
                Teacher Education Internet Server



```
                    Teacher Education Internet Server

 1.  About the Teacher Education Internet Server              <Directory>
 2.  Electronic Publications                                  <Directory>
 3.  Mathematics Education                                    <Directory>
 4.  Research                                                 <Directory>
 5.  Reading and Language Arts                                <Directory>
 6.  Social Studies                                           <Directory>
 7.  Special Education                                        <Directory>
 8.  Educational Technology                                   <Directory>
 9.  International Education                                  <Directory>
10.  SITE Information                                         <Directory>
11.  Teach-IT Modules                                         <Directory>
12.  Software Archives                                        <Directory>
13.  Telecommunications and Networking                        <Directory>
14.  Interactive Resources                                       <Telnet>
15.  Other Internet Resources                                 <Directory>
```

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U.S. DEPARTMENT OF EDUCATION/OERI GOPHER SERVER

The U.S. Department of Education offers many valuable resources to teachers including grant information, publications, and educational software.

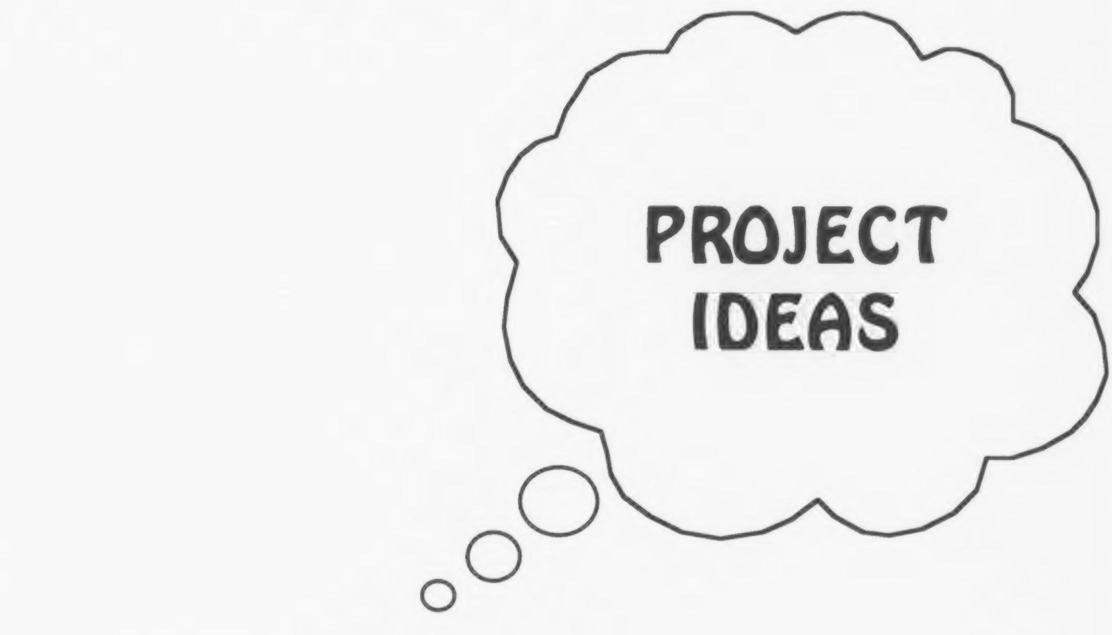
gopher gopher.ed.gov

Gopher Path:

World Wide Gophers/
    North American Gophers/
        USA/
            General/
                U.S. Department of Education

```
                    U.S. Department of Education

 1.  About This Gopher                                                 <Directory>
 2.  What's New in This Gopher                                         <Text File>
 3.  U.S. Department of Education Programs-General Informati..         <Directory>
 4.  Educational Research, Improvement, and Statistics (OERI..         <Directory>
 5.  Announcements, Bulletins, and Press Releases                      <Directory>
 6.  U.S. Department of Education/OERI Publications                    <Directory>
 7.  U.S. Department of Education Phone Directory                     <Phone Book>
 8.  Search this Gopher by Key Words (Jughead)                         <Directory>
 9.  Educational Software                                              <Directory>
10.  Veronica Searches and Other Gophers                               <Directory>
```


PROJECT
IDEAS
CYBER BEE

Chapter 5

INTERNET PROJECT IDEAS

This section is compiled from files available on the Internet. There are several resources which will help teachers and students to find projects and interact with other classrooms across the country and around the world. Good starting points are the *Internet Resource Directory Part IV: Infusion Ideas* by Judi Harris and How *Teachers Find Projects* compiled by Beverly Hunter. Both are available on the Internet. Many of the Infusion Ideas are listed as individual menu items on the CICNet gopher along with *How Teachers Find Projects*. Armadillo, K12Net, the National Public Telecomputing Network's Academy One, and KIDLINK are other areas where you can find and participate in projects. Listservs are another good way to find projects.

ACADEMY ONE

The projects included are curriculum-based which teachers have developed for use with their students. They encourage all levels of computer users to participate. By recognizing the many different learning styles, the projects remain flexible for sharing information and creating the classroom without walls. The following are examples of projects from Academy One. The complete list can be found on the National Public Telecomputing Network: ftp nptn.org cd /pub/nptn/info.nptn

NESPUT TELEOLYMPICS - A "Virtual" Olympics
(Grades 1-12; March to May)

Students compete in a series of track events in their own schoolyards, posting the winning scores in each category to the computer network. Results are compared, and international winners receive recognition. In addition to the track events, Opening and Closing ceremonies are conducted like the real Olympics, and information is exchanged about schools and communities around the world.

FOREST DAY -
[Multiple grade levels; Special Event - September 24, 1993]

This will be a day to reflect on the importance of the forest. This activity includes discussions on the various types, from rain forests to kelp forests. Activities include a school-site tree inventory, forest picture (GIF file) exchange, and analysis of the effect of deforestation on the earth's climate using the Lawrence Livermore supercomputer center.

STRUCTURES; TECHNOLOGY AND SCIENCE FOR YOUNG CHILDREN -
[Ages 5-8; On-going project]

This project contains thirteen problem-solving and learning activities that use literature to integrate technology and science instruction across the elementary curriculum for early childhood. A moderated discussion area with the grant-winning mentor teacher will continue throughout the school year.

Contact: Cathy Ney (cney@radford.vak12ed.edu)

LA CLASSE GLOBALE FRANCOPHONE (La CGF) -
[Multiple grade levels; On-going project]

This is an electronic classroom designed for communications in French between young people of all ages and all countries. The area will include the news from France in French five days a week and moderated discussions with lesson plans that change regularly.
Contact: Yona Webb (aa844@cleveland.freenet.edu)

NPTN STUDENT NEWS NETWORK -
[Multiple grade levels; On-going project]

Schools are encouraged to contribute electronic editions of their school newspapers. The text of each edition should be distilled into a single file of no more than 3,000 to 4,000 characters, and uploaded to the NPTN STUDENT NEWS NETWORK on the nearest system, where it will be distributed automatically to other schools across the network. Contact:
Judson Elliott (aa695@cleveland.freenet.edu)

IDITAROD -
[Multiple grade levels; Special Event - March]

Get the latest reports on the exciting dog sled race across Alaska. Willoughby Middle School brings these reports to you in March as it happens. You can read it on the newsgroup or in your e.mailbox via a listserv.
Contact: Willoughby Middle School (aa695@cleveland.freenet.edu)

SPOTLIGHT ON PEOPLE and SPOTLIGHT ON AUTHORS -
[Multiple grade levels; On-going project]

These projects spotlight accomplished people in all walks of life. Students have an opportunity to write to these people and ask questions. This gives students an opportunity to gain knowledge about leaders, inventors, authors, and various professionals. It also gives accomplished people the ability to tell the students what they might do to succeed in life. Contact: Sheryl Maxsom (aj615@yfn.ysu.edu) and Carol Hyatt (chyatt@cap.gwu.edu)

SONNET-WRITING CONTEST -
[Middle and high school students; Special Event - March]

Students are invited to participate in a sonnet writing contest with a panel of impartial literary teachers doing the judging. Cash prizes were awarded in 1993, and will be awarded in 1994. All sonnets are posted to the Student Author newsgroup and then printed in a booklet available from NPTN at cost.
Contact: Marge Cargo (mcargo@eis.calstate.edu)

A DAY IN THE LIFE OF A STUDENT -
[All grade levels; Special Event - January]

Tell others about a day in your life. The project involves keeping a chronological account of a single pre-arranged day from wake-up to bedtime. Student entries can be compiled into a class file and shared with other participants. Classe compare student responses, attitudes and schedules to learn about other types of schools and other cultures.
Contact: Sheldon Smith (shsmit@eis.calstate.edu)

INTERNATIONAL e.CLUB -
[All grade levels; On-going project]

The e.Club is a place where electronic addresses can be exchanged between students (and teachers) who would like to engage in an electronic mail project or simply find a "keypal". We will use this area for exchanging information about the holidays and about the schools during selected special events.

INTERNATIONAL HOLIDAY EXCHANGE -
[All grade levels; Special Event - November to January]

Students around the world can compare their holiday customs. This is a real eye-opener and learning experience as students not only share their favorite customs, but recipes, and reasons behind what makes this such a special time of year.

STUDENT ARTIST -
[All grade levels; On-going project]

This is an area where kids can post their pictures created with word processing programs. This is one of the best ways to reach the youngest kids (and the ESL students), and introduce them to those "extra characters" on the keyboard, while easing them into the world of telecommunications. The older students have successfully presented their holiday greetings as pictures in this area.

ARMADILLO

From the Armadillo, the Texas Studies Project gopher comes this file about their project area followed by the menu under Super Projects.

About Super Projects!!!

The Super Projects!!!/ directory will contain work by Texas Students. The theme will generally be Texas Studies in the broadest sense.
If you have projects you would like to have included in Super Projects!!!/ send a description of the project to: armadillo@chico.rice.edu

We will get back with you.

Super Projects!!!

1. About Super Projects!!!.
2. COSN K12 Internet Projects/
3. Class Projects to Share/
4. The CityLink Gopher (Experimental)/
5. A Day in the Life/
6. Folktales/
7. Global Handshake Survey (Northbrook MS, SpringBranchISD, TX)/
8. History Projects/
9. International Ecology Art Project/
10. Math Projects/
11. Myths and Legends About Texas/
12. Networked Projects /
13. Physical Education Projects/
14. Science Projects/
15. Simulations/
16. TENET Bits and Bytes (From Pat Cook and her SpringBranch kids)/
17. Technology/
18. Transportation/

CICNet

This is the description from the about file and a list of the projects described:

Here are several ways in which teachers have used and are using the Internet in their classrooms. Many of their reports refer to resources you'll find elsewhere in this gopher. Other resources may no longer exist (for example, a project that ran for only a limited time). If you don't see a resource listed in this gopher's menus, check the report that described the resource. Some reports include an address you can use to contact the provider for more information.

I have modified the descriptions of these sites slightly to make them display well on a screen. My apologies to the authors of these documents if I've introduced any changes in content.

Rhana Jacot, Information Services Coordinator
rjacot@cic.net CICNet, Inc.
voice: (313) 998-6521 2901 Hubbard Drive, Upper Pod A
fax: (313) 998-6105 Ann Arbor, MI 48105-2467

Internet in the Classroom

1. About Classroom Ideas.
2. ** How Teachers Find Projects **.
3. Academy One Project List (September 1993).

4. Aid to Foreign Language Acquisition.
5. Archaeology Units.
6. Ask Dr. Science.
7. Ask Prof. Maths.
8. At-Risk Students
9. Beginning Examples.
10. Building a Better Tomorrow.
11. Chemistry Searches.
12. Classroom Programming Projects.
13. Cleveland FreeNet and Your School.
14. Current Freeware and Shareware.
15. Current Issues Project.
16. D-Day 50th Anniversary on the Web.
17. Earth Day Treasure Hunt.
18. First World Wide Web Server Designed By Kids.
19. Glenview School District (K-8) World Wide Web Server.
20. Hillside Elementary School WWW Internet Research Project.
21. History of Math.
22. Internet and Astronomy.
23. Introduction to Computer Science for the 21st Century.
24. KNSO News Service for Jr. High and High School Students.
25. Legos on Mars.
26. Mail Art Club.
27. NASA/AskERIC Multi-media Lesson Plans.
28. Telecomputing Activities.
29. WhaleNet.
30. What's a Sniglet Project.
31. What's the Same and What's Different Project.
32. Young Kids and Language Arts.

K12Net Projects:

K-12Net is a News Group network with an area open for projects called Channels. Here are examples of some of the projects which have been posted. The Project Coordinator for this area is Helen Sternheim.

uucp: uunet!m2xenix!puddle!321!109!Helen.Sternheim
Internet: Helen.Sternheim@f109.n321.z1.fidonet.org

Brown Bag Science

Brown Bag Science Experiments that use simple materials and can be sent home with your students. For upper elementary and middle school students.

Global Village News

Community or School News items. These should be articles that have a local flavor. We would enjoy hearing from all areas of the world.

MathMagic

MathMagic is a project for students in grades K-12 sponsored by the K12Net. Students can participate in writing and solving open ended math problems with other students from around the world. They can solve the problems either individually or in teams. During the school year there are monthly cycles for posting the problems and submitting the answers. Different problems are given for various grade levels. Students can be very creative in their problem solving, including acting out the problems.

OTHER PROJECT SAMPLES:

Map the Monarchs!
Journey North's
Monarch Butterfly Migration Project

Get ready! They're on their way! It's time to start watching for monarch butterflies. You can be part of an international science project using telecommunications! As the monarchs migrate north from their wintering grounds in Mexico, people across North America are reporting the first butterfly they see. Together we are producing, for the first time ever, a "live" map of one of nature's most dramatic migrations.

You Can Join the Fun!
Just fill out the form below and return it by electronic mail. Then watch for regular migration updates here. Or, if you prefer, subscribe to the Journey North listserve at: jnorth@ jriver.com

More About Journey North
Through the Journey North program, students can follow migration as spring as it sweeps across the continent of North America to land's end in the Arctic. Students witness the wonders of migration as they travel with some of the world's most accomplished wild adventurers: whales, eagles, songbirds and shorebirds, sea turtles, salmon and caribou and many more wild adventurers!

For more information about Journey North, send inquiries to:
jnorth@jriver.com

MAYAQUEST

KIDS RIDE THE INFORMATION SUPERHIGHWAY TO UNCOVER CLUES TO ANCIENT MAYA MYSTERY

St. Paul, MN — Imagine, you re 12-years-old and you have the chance to take part in a modern-day expedition to help make real discoveries. You re going to a place where you can still find lost cities in the jungle, secret inscriptions that only a few people can read, and tombs with treasures in them.

In January 1995, the MayaQuest team of cyclists led by Minnesotan Dan Buettner will embark upon a wholly kid-directed expedition into the Maya world of Central America, into Guatemala, Mexico, Belize and Honduras. Laptop computers and satellite equipment will link the cyclists to schools and home where kids will direct the three month expedition using the Prodigy Service, a telecomputing network with 2.2. million subscribers..

The MayaQuest expedition will provide an interdisciplinary learning opportunity for schools around the nation; printed materials, regular broadcast reports on CNN Newsroom, a toll-free hotline and an Internet forum will aid educators as they use the trek to teach about ancient civilizations, math, science, geography, art, architecture, and the links between the Maya and present day civilizations. After the expedition has finished, MECC, a leading publisher of educational software, will then produce a CD that captures the event's excitement in an educational, multimedia format.

Think of it as bringing a video game to life: From anywhere in the United States, kids can use personal computers to interact with the team and actually decide what the team should pack, which active Maya dig to explore, which Maya expert to consult, etc. They will learn how to read glyphs, will pose questions for the team and the experts and will be asked to help solve problems that arise during the course of the expedition. Archaeologists at remote sites will count on these kids for their library skills and their fresh insights into ancient mysteries—allowing kids to actually help make discoveries.

Educational supporters of the expedition include Hamline University's Center for Global Environmental Education, Prodigy Service, MECC, and Trend Enterprises.

To receive free materials and a resource list for tracking the expedition, send a SASE, ($.98 and a 8" x 10" envelope) to Center for Global Environmental Education, Hamline University, 1536 Hewitt Avenue, St. Paul, MN 55104, tel. 612-641-2855; fax. 612-641-2987; email: jgasperi@seq.hamline.edu

# # #

CONTACT: Jennifer Gasperini
Center for Global Environmental Education
Hamline University
612-641-2855

Shelli-Kae Foster
Earthtreks
612-349-6606

OVERVIEW OF PILLBUG PROJECT:

Environmental Adaptation: The Pillbug Story

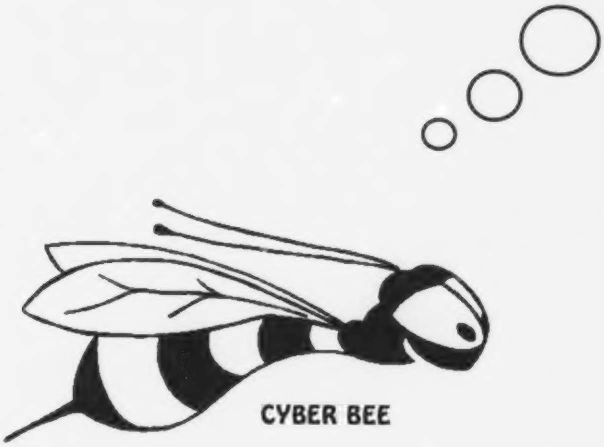
The project was funded by the TAPESTRY grant program, funded by Toyota and administered by NSTA. During the 1994-95 school year, my 7th grade life science students will make contact (by E-mail) with several schools (5 to 10 schools) from various locations throughout North America. Each school will collect live pillbugs (Isopoda; Crustacea, species will certainly vary widely) locally, place the pillbugs in a suitable box (I can supply the box and shipping cost) and send them to my school in Missouri, along with a photograph or videotape of the local habitat in which they were collected. I will send these same materials from our area to each school that participates. If you wish to receive these materials from the other schools you can contact them via E-mail and arrange to establish a network. I will provide you with information on all of the participating schools (location, E-mail address, etc.) when the project starts in the Fall.

My students will conduct a series of observations and experiments on the pillbugs from each area, and will compare the resulting data to get a picture of how this organism is adapted to different environments (hence the name "Environmental Adaptation: The Pillbug Story"). If you are interested in conducting these observations and experiments at your own schools, I will provide the information you need to carry them out. Most of them require commonly available equipment and materials. If you are not interested in actually carrying out the observations and experiments I will provide you with the resulting data from all of our activities with pillbugs from all of the participating schools. This way your students could still see the results of our experiments and benefit from them.

If you are still interested in participating I you know of any other teachers anywhere in North America (especially in the six target areas described above) who may be interested, please forward this message.

STAN SMITH
Warrensburg Middle School
522 East Gay St.
Warrensburg, MO 64093
(816) 747-5Y612 (school)
(816) 747-7534 (home)
E-mail: ssmith@services.dese.state.mo.us

LESSON PLANS



Chapter 6

POINTERS TO LESSON PLANS

This section gives pointers to lesson plans on the Internet. As new gophers are created and as more K-12 educators use the network, the potential for curriculum resources will grow.

AskERIC

gopher ericir.syr.edu

AskERIC/
    Lesson Plans

Lesson Plans

1. Search Lesson Plans <?>
2. Astronomy/
3. CNN/
4. Discovery Education Online/
5. LanguageArts/
6. LiquidCrystal.
7. Math/
8. Miscellaneous/
9. NASA/
10. Science/
11. SocialStudies/
12. WGBH

Date: Wed, 13 Apr 1994 10:38:33 EDT
From: Virtual Dave Lankes <rdlankes@ericir.syr.edu>
To: Multiple recipients of list EDTECH <EDTECH@msu.bitnet>
Subject: AskERIC's Multimedia NASA Lesson Plans

AskERIC announces
NASA Multimedia Lesson Plans
for Middle and High School students.
[http://eryx.syr.edu]

AskERIC in Cooperation with NASA's JPL has placed a two to three week course guide to accompany on-going shuttle and radar imaging missions. The lesson plans are now available in WWW/Mosaic format (soon in gopher and ftp as well).

The lessons are made up of material provided in the SIR-CED CD-ROM provided by NASA.

Presently the introduction and Module 1 (of 5) of the teachers guides are available. The rest of the teachers guide will be available in the next week, with student guides quickly following.

The lessons include some beautiful images, and soon a little animation.

Please take a look and let us know what you think.

The lessons can be accessed through WWW/Mosaic through the following URL:

http://eryx.syr.edu

Below is a description of the project from the CD.

What is SIR-CED?

SIR-CED is based around NASA's imaging radar program. Imaging radar is a key technology used by scientists to monitor the earth's environment. SIR-C, or Spaceborne Imaging Radar-C, is the latest generation of imaging radars produced by JPL for NASA, and is scheduled to fly on the Space Shuttle in April 1994, with two follow-on flights planned in 1994 and 1995. SIR-C represents the state-of-the-art in radar imaging technology, and will offer scientists a unique look at the earth from space. Scientists will use the radar images provided by SIR-C to view areas of the earth that are normally obscured by clouds, to monitor deforestation, to search for buried river channels in the Sahara Desert, and to estimate the extent of flooding in river basins, among other things. The SIR-CED program is designed to help meet some of the goals set out in NASA's Strategic Plan for Education (see Further Reading). In putting together this initiative, NASA and JPL's aim is to reach as many Middle School and High School students as possible in the Southern California area and across the nation in order to:

1. Carry the message that NASA is actively pursuing Earth observation programs under the umbrella of 'Mission to Planet Earth.

2. Teach them that imaging radars are an important and current part of these programs.

3. Show how imaging radars work and how they are used to monitor the world around us.

4. Develop practical experiments and procedures to assist educators in teaching earth science, computing and mathematical principles to Middle School and High School students, in Southern California and across the United States.

Although some segments of the SIR-CED program are based around the SIR-C mission, the program is designed to be used with data from a wide range of imaging radars. Examples of data from earlier imaging radar missions canbe found in the CD-

ROM accompanying this package, including images from Magellan of the planet Venus. The software included in the SIR-CED package should be flexible enough to handle radar image data from future missions, too. The SIR-CED program should be useful as an introduction to imaging radar and its role in monitoring the earth's environment over the next decade or so.

```
............................................................
: "Virtual" Dave Lankes           rdlankes@ericir.syr.edu :
: AskERIC Researcher "This is not your father's Internet" :
: School of Information Studies       Syracuse University :
^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
```

BBN's - National School Network Testbed

gopher coopernicus.nnb.com

BNN's/
    National Schools Network Testbed/
        Shadows Science Project
        USCD Internet Lesson Plans
        MUSEs (Multi-user Simulation Environments) in education

Shadows Science Project

1. Earth Stopped Rotating.
2. Path of the Sun.
3. Sun and Angles.
4. Shapes of Shadows.
5. Sun Go Down on the Horizon.
6. Sun Set In the Same Place?.
7. What is Solar Noon?.
8. When Will the Sun Explode?.

UCSD InternNet Lesson Plans

1. About this collection.
2. Biology/
3. Earth Science/
4. English/
5. Lessons in Spanish/
6. Mathematics/
7. Physical Science and Chemistry/
8. Physics/

MUSEs (Multi-user Simulation Environments) in education

1. The MUSE as an educational medium.
2. MicroMuse at MIT.
3. Virtual... Communities, and Informal Science Ed - Barry Kort.
4. MUSE Manual Version 1.5 revision C/
5. Access to educational MUSEs <TEL>

Community LEARNING NETWORK OF BRITISH COLUMBIA

gopher cln.etc.bc.ca

Community of Learning Network/
- Special Projects for the CLN/
  - Lesson Aids Catalogue (BCTF)/
    - Lesson Aids by Subject/

This is a pilot project of the Education Technology Centre (ETC) and the Ministry of Education in British Columbia. Lesson plans can be ordered from this system.

Lesson Aids by Subject

1. Alternative Education
2. Art/
3. Business and Consumer Education/
4. Computer Education/
5. English as a Second Language
6. English/Language Arts/
7. Environmental Education/
8. French Immersion/
9. Home Economics
10. Learning for Living/
11. Mathematics/
12. Modern Languages/
13. Multiculturalism/
14. Music/
15. Peace and Global Education/
16. Physical Education/
17. Salmonids in th Classroom
18. Science/
19. Social Studies/
20. Teaching and Evaluating
21. Women's Studies/

EE - LINK NATIONAL CONSORTIUM FOR ENVIRONMENTAL EDUCATION

gopher nceet.snre.umich.edu

EE - LINK/
Classroom Resources for Environmental Education/
School Nature Area Project - Resources for Primary Education
School Nature Area Project - Resources for Secondary Education

Introduction to Classroom Resources

This section of EE-Link is for full text instructional materials, which can be browsed for ideas, or downloaded to modify or use directly. As we build this section of EE-Link, we will choose resources with specific environmental education objectives. Instructional materials that do not emphasize environmental issues or actions can be found by searching gophers accessible through "Educational Resources on the Internet" from the root menu.

For teachers, full text materials may be the most practically useful kind ofresource that EE-Link can offer. Consequently, we hope to greatly expand this section within the next 2 months. In the meantime, references to SOURCES of instructional materials are provided in "Classroom References for Environmental Education," on the root menu.

March 24, 1994

File Location: Classroom Resources/Introduction to Classroom Resources

Classroom Resources for Environmental Education

1. Introduction to Classroom Resources.
2. Cornell's Solid Waste Activities/
3. Things to Do to Save the Planet/
4. Catalogs of Classroom Resources.
5. Recycling: Correspondence Course/
6. School Nature Area Project—Resources for Primary Education.
7. School Nature Area Project—Resources for Secondary Education.
8. Lesson Plans from Big Sky Telegraph and ERIC/

Lesson Plans from Big Sky Telegraph and ERIC

1. ReadMe for Information about Lesson Plans on EE-Link <Text File>
2. "Oh Deer" — An Environmental Game <Text File>

3. Buggy Diner Activity	<Text File>
4. Designing an Ecologically Sound City	<Text File>
5. Ecological Impact of Disposable Diapers	<Text File>
6. Ecological Impact of Litter	<Text File>
7. Family Activity Measuring Household Waste	<Text File>
8. Future Adaptation of Fish to the Oceans	<Text File>
9. Integrated Unit on Nevada's Solid Waste Disposal	<Text File>
10. Introduction to Solid Waste Management	<Text File>
11. Life in the Future	<Text File>
12. Migrations/Coastal Wetlands Game	<Text File>
13. Pond Ecology	<Text File>
14. Recycling Paper Experiment	<Text File>
15. Recycling Using Junk Mail	<Text File>
16. The Importance of Trees in Rural Areas: Planting a Snow..	<Text File>
17. Water Pollution	<Text File>
18. Water Quality for Freshwater Organisms — An Experiment	<Text File>

INFORMNS (MINNESOTA K-12 PROJECT)

gopher informns.k12.mn.us

Minnesota Valley National Wildlife Refuge/
Lesson Plans from the MVNWR

Elementary Level Lesson Plans from the MVNWR

1. 02 Looking for Lifestyles	<Text File>
2. 03 Pond Web	<Text File>
3. 06 Animal Masquerade	<Text File>
4. 07 Birds, Beaks and Adaptations	<Text File>
5. 08 Deer Tails and Trails	<Text File>
6. 09 Eco-Beaver	<Text File>
7. 10 Endangered Species	<Text File>
8. 11 Hunters of the Night	<Text File>
9. 12 Snow Stories	<Text File>
10.13 The Right Bite	<Text File>
11.14 Wetland Birds And Their Habitat	<Text File>
12.17 Mist Netting	<Text File>

Secondary Level Lesson Plans from the MVNWR

1. 05 Snow Pits	<Text File>
2. 16 Soil Shakedown	<Text File>
3. 19 Marsh Dilema	<Text File>

4. 21 Muskrat Marsh <Text File>
5. 23 White-tails in the Valley <Text File>
6. 24 Wildlife Telemetry <Text File>
7. Aquatic Tolerance <Text File>
8. Biodiversity Game <Text File>

JVNCnet

gopher r2d2.junc.net

JVNCnet/
    Educational Resources/
        Discovery/Lesson Plans & Idea Sharing
        Teacher Support

Discovery

1. Assignment Discovery (K-12)/
2. At-Home Viewing/
3. Lesson Plans & Idea Sharing/
4. TLC Elementary School/
5. Teacher TV/
6. Videos - Interactive Discs/
7. Welcome - About Discovery/

Lesson Plans & Idea Sharing

1. ASKTHE.4TX (Ask the Teacher) <Text File>
2. BEHIND.4TX (Behind the Scenes) <Text File>
3. INCLASS.4TX (In the Classroom With) <Text File>
4. LSSNPLNS.4TX (Discovery Lesson Plans) <Text File>
5. MEDIALIT.4TX (The Crucial Skill of Media Literacy) <Text File>

KIDLINK GOPHER

gopher kids.ccit.duq.edu

KIDLINK/
    Kids Proj Activities/
        Lesson Plans for UNICEF Project

Lesson Plans for the UNICEF Project

1. _.	
2. Lesson Plan File Index	[KIDPROJ UNICEF].
3. Introduction	[KIDPROJ UNICEF-A].
4. Lesson 1: Child Rights Convention	[KIDPROJ UNICEF-B].
5. Week 1: Introduction Supplementary	[KIDPROJ UNICEF01].
6. Week 2: KIDS and WATER	[KIDPROJ UNICEF02].
7. Week 3: KEEP US SAFE	[KIDPROJ UNICEF03].
8. Week 4: WE ARE WHAT WE EAT	[KIDPROJ UNICEF04].
9. Week 5: STREET KIDS	[KIDPROJ UNICEF05].
10. Week 6: HEALTH AND EDUCATION	[KIDPROJ UNICEF06].
11. Week 7: CHILDREN WITH DISABILITIES	[KIDPROJ UNICEF07].
12. Week 8: DEVELOPING COUNTRY FOCUS	[KIDPROJ UNICEF08].
13. Week 9: GLOBAL ENVIRONMENT	[KIDPROJ UNICEF09].
14. Week 10: Review	[KIDPROJ UNICEF10].
15. KIDS IRC Lesson Experiences/	

STEM~Net NEWFOUNDLAND and LABRADOR

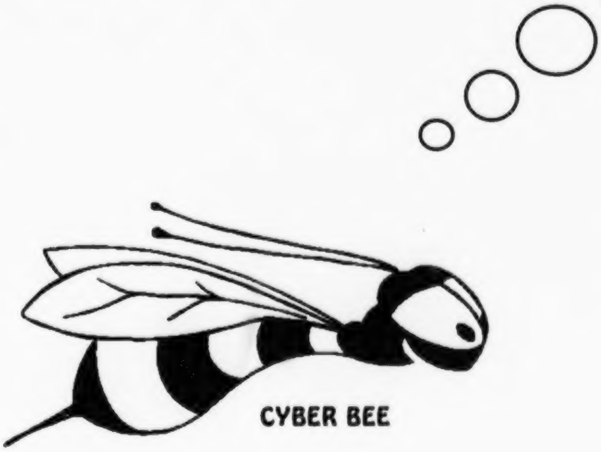
gopher calvin.stemnet.nf.ca

NLTA Special Internet Councils/
    Online Expertise/
        Help and Training/
            Training Projects/
                Lesson Plans 7 - 9

Lesson Plans (7 - 9)

1. 00index	<Text File>
2. diver.txt	<Text File>
3. diver.wp5	<PC Bin>
4. eratosth.txt	<Text File>
5. eratosth.wp5	<PC Bin>
6. popcan.txt	<Text File>
7. popcan.wp5	<PC Bin>

LOCAL LIBRARY CATALOGS



Chapter 7

BEXLEY PUBLIC LIBRARY

Three areas of information are provided by Bexley Public Library: the online catalog, library events, and library hours. The modem should be set to 8 databits, no parity, and one stop bit. The phone number is 231-1193.

1. Select Bexley Public Library from the directory
2. Dial
3. After connecting, follow the screen directions as illustrated below.

```
   Bexley Public Library Dial-Up Access Menu

 1  - To access the ONLINE CATALOG
 2  - To access Library Events
 3  - To access Library Hours and Holidays
END - Quit and log off

Please enter a number or END and press RETURN: 1


              --- Please Wait ---


      Bexley Public Library's Dial-Up Access
               Online Catalog

             M A I N   M E N U

             1 = Author or Composer
             2 = Title
             3 = Subject
             4 = Name as subject
           END = Return to the Dial-Up Access menu

     Please enter a code for the type of search
          (or ? for help) and press NEWLINE :
```

DISCOVERY PLACE

The Columbus Metropolitan Library allows users with a modem to access their online catalog from a remote location. The telephone number is 645-2070. The modem settings are 8 data bits, no parity, and 1 stop bit.

1. Select Discovery Place from the directory
2. Dial
3. After connecting, follow the directions given on the screen. This is an example of the screen you will see.

PLEASE NOTICE
Dial Access is Not available Tuesdays from 2:30 AM until 3:30 AM.

```
                 WELCOME TO THE
        COLUMBUS METROPOLITAN LIBRARY'S
                ON - LINE CATALOG

   To search enter one of the following commands:

     A/Author-name    to find items by author name
     T/Title          to find items by title
     S/Subject        to find items by subject
     C/Call-number    to find items by call number

   Or use one of the following special commands:

     Home to start again at this screen
     Help to see a list of all commands
     Exit to end this session

     Note: If your terminal is idle for 8 minutes,
           the system will end your session.
```

You may also reserve a book using the ten digit bar code number on your library card. Type res at the appropriate prompt, then follow the screen directions.

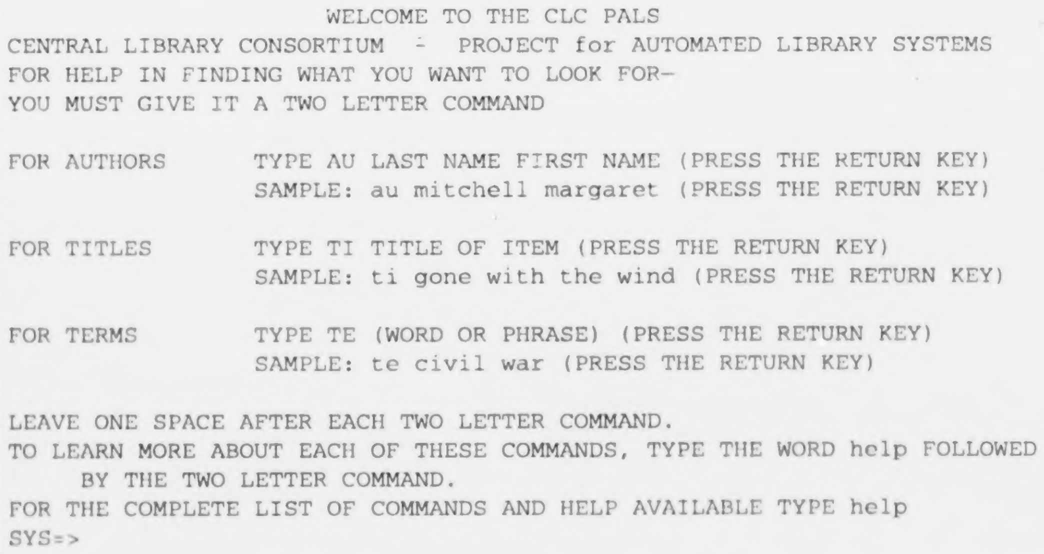
GRANDVIEW HEIGHTS PUBLIC LIBRARY

The Grandview Heights Public Library system is available 24 hours a day except during maintenance periods which are usually after 9 P.M. Library catalogs which may be searched are Fairfield County, Grandview, Pickerington, and Wagnalls Memorial. The modem should be set for 7 databits, even parity, and one stop bit. Terminal Emulation should be set to VT100 (DEC100 when using ProTerm). The phone number is 833-1004 or 833-1007.

1. Select Grandview Heights from the directory
2. Dial
3. Wait for the Welcome Screen.
4. Type **lib ghp** to search Grandview or **lib sys** to search all the collections. <R>
5. To exit the system, type **$$soff**

Once you have done a search you can type **bo** for books only, **vi** for video only, or **so** for sound recordings only.

* If you see a message "service," call 486-2951 immediately.
* If you don't use the system for 3 minutes, you will be disconnected.



```
                    WELCOME TO THE CLC PALS
CENTRAL LIBRARY CONSORTIUM  -  PROJECT for AUTOMATED LIBRARY SYSTEMS
FOR HELP IN FINDING WHAT YOU WANT TO LOOK FOR-
YOU MUST GIVE IT A TWO LETTER COMMAND

FOR AUTHORS      TYPE AU LAST NAME FIRST NAME (PRESS THE RETURN KEY)
                 SAMPLE: au mitchell margaret (PRESS THE RETURN KEY)

FOR TITLES       TYPE TI TITLE OF ITEM (PRESS THE RETURN KEY)
                 SAMPLE: ti gone with the wind (PRESS THE RETURN KEY)

FOR TERMS        TYPE TE (WORD OR PHRASE) (PRESS THE RETURN KEY)
                 SAMPLE: te civil war (PRESS THE RETURN KEY)

LEAVE ONE SPACE AFTER EACH TWO LETTER COMMAND.
TO LEARN MORE ABOUT EACH OF THESE COMMANDS, TYPE THE WORD help FOLLOWED
     BY THE TWO LETTER COMMAND.
FOR THE COMPLETE LIST OF COMMANDS AND HELP AVAILABLE TYPE help
SYS=>
```

BEST COPY AVAILABLE

OSU/LCS

LCS is the automated library catalog for Ohio State University and the State Library of Ohio. It also contains many entries for the Ohio Historical Society and Center for Research Libraries. The modem settings are 8 data bits, no parity, and 1 stop bit. Also set terminal emulation to VT100. Use the following telephone number

at 2400 BPS:	292-0741
at 9600BPS:	292-0742

```
            THE OHIO STATE UNIVERSITY / ACADEMIC COMPUTING SERVICES
                           AUTHORIZED USERS ONLY

You have accessed the new Sonngate, a dial-in service replacing the ACS Network
Switch. Sonngate connects you to the SONNET campus network and the Internet.

You can connect directly to:
    * OASIS by typing OASIS at the Username prompt
           or
    * LCS by typing LCS at the Username prompt

To connect anywhere else you must have a SONNET username. You can use a MAGNUS
or Postbox username and password as your SONNET username. Current Ohio State
faculty, staff, or students who do not know their SONNET username can get it:
    * by typing NEWUSER at the Username prompt.

(to exit here, type quit)


User Access Verification

Username:LCS
Enter Device Type (PAPER):PAPER
```

To search the OSU/LCS catalog, use the following:

sub/	Subject Search
aut/	Author Search
tls/	Title Search
ats/	Author-Title Search
ser/	Series Title Search

Limited service is also available on Oasis. News and weather, people directories, opportunities, newsletters, journals, and electronic bookshelf are available.

UPPER ARLINGTON

Upper Arlington Public Library provides dial-up access for those with a 1200 baud or higher modem. The modem settings are 8 data bits, no parity, and 1 stop bit. The phone number is 486-8253.

1. Select Upper Arlington from the directory
2. Dial
3. Tap the return key until the welcome screen appears.
3. Follow the screen directions at the welcome menu
4. To end a session hangup or disconnect

```
            WELCOME TO THE UAPL ONLINE CATALOG

 The UAPL Online Catalog is available at public access
 terminals in the 3 libraries and from your home computer via
 modem.  Dial 486-UALD (486-8253) or 486-7120.

 USE THE COMMANDS LISTED BELOW TO SEARCH FOR LIBRARY ITEMS.

 A/(last name, first name) to search for an author
 T/(title) to search for a title (omit the initial article)
 S/(subject term or terms) to search for a subject
 W/(word) to search by a key word
 B/(word & word) for a boolean search using 2 key words

 Type commands in this way:

 A/JOHNSON SAMUEL    (Then press the Enter or RETURN key)

 FOR ADDITIONAL HELP WITH THE SEARCHES BELOW, TYPE THE
 CORRESPONDING NUMBER:
1 Author    2 Title    3 Subject    4 Word    5 Boolean
```

WESTERVILLE INFORMATION NETWORK

There are two ways to search on the Westerville system, either manually or by a menu-driven screen. At the Welcome Screen you can choose the method for searching. The modem should be set for 8 data bits, no parity, and 1 stop bit. Also set terminal emulation to VT100. The phone number is 899-4890.

1. Select CATalog ON CALL from the directory
2. Dial
3. After the connect message, hit <R> until a colon (:) appears.
4. If the message CAN'T INITIATE NEW SESSIONS NOW appears, the dial-up lines are not available for public use
5. Type at the colon: **Hello USER.CLAS01** <R>
6. The statement WELCOME TO THE WESTERVILLE INFORMATION NETWORK will be displayed followed by HAVE A NICE DAY!
7. Type ? for a Menu-driven search, then <R> or Type one of the letters below for a manual search followed by the appropriate words, then <R> .

* You will be automatically disconnected if there is no communication between you and the system for 10 minutes.

```
 LOCATION is WESTERVILLE INFO. NETWORK
ALL LIBRARIES WILL NOW BE SEARCHED

Enter
?.....Menu-driven search   Help...About this screen    ............Any Command
[You can type ? ON ANY SCREEN AT ANY TIME to start a menu-driven search.]
```

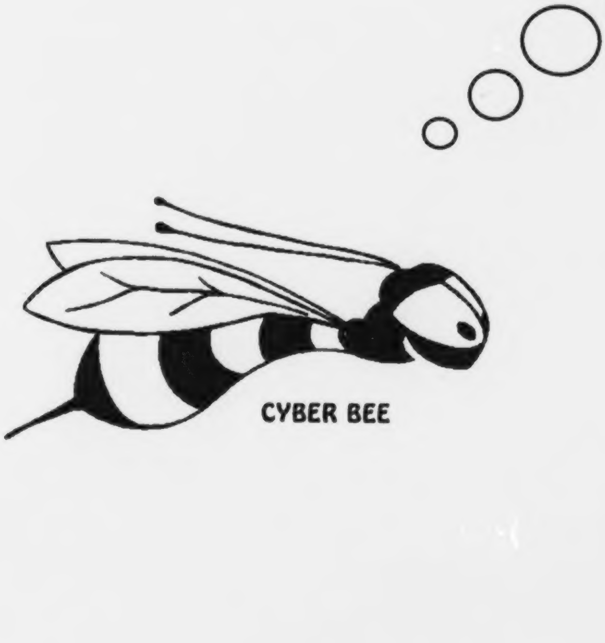
```
WESTERVILLE - - -(ALL)- - - - VTLS - - - - - - - - - - - - - SEARCH MENU

 Welcome to the VTLS Menu-Driven Search System!

           0.  Help Search
           1.  Author Search
           2.  Subject Search
           3.  Title Search
           4.  Call Number Search
           5.  Keyword Search
           6.  Combined Word Search
           7.  Special Search

 Type the number next to the search you want and press
 the <Return> key, which may be labeled <Enter> on your
 keyboard. Press <Return> to exit Menu-driven Search System.
```

LOCAL BULLETIN BOARDS



Chapter 8

COLUMBUS CONNECTION

The Columbus Connection is an electronic bulletin board operated by John Wolverton (Sysop). Modem users can access the board at 471-1265 or 337-3705, 24-hours per day. The bulletin board service is free. You are allowed to access the system 20 hours per month (40 minutes a day). In order to keep the account, you must call at least once every 60 days. The modem settings are 8 data bits, no parity, and 1 stop bit.

One of the great features about this bulletin board is that information can be exchanged with others from around the world in the Pen Pal Exchange and there is a direct e-mail connection to Internet.

After connecting, follow the screen directions. You will be given a login name and can choose your own password.

```
To activate your internet mail address,  send a letter with your
request To: krm_wolve@mecsys.ohio.gov
You will be notified by mail that your internet mail is active.
```

```
                         The Columbus Connection BBS
                               MAIN  MENU
   ___________________________________
      Conference System           E-Mail               Other Areas
   __________    _________      ___________

    S Select Message Topic    M Mail Box Scan          T Transfer section
    C Select Message Base     Y Mail you sent          D Change term settings
    P Post a message          E Send E-mail            V Voting Booth
    N New Messages            F Feedback               A Auto posting
    R Read Sequentially       Q Mulit-Mail (bulk)      B Bulletins (news)
    S Scan Messages                                    K Caller Stats
    J Join/Ignore Bases                                L Page SysOp
    ! QWK (Offline Reader)                             I System Info
                                                       U User Listings
        Extra Features             Games               X NetInfo
    __________    _________

    Z Teleconferencing        ~ The Pit <ANSI>
    W Who's online            # Chess    <ANSI>        G Logoff

Topic: Local Conferences (some with Proline sites)
[1] TCC Chat (Local Discussion)
Time Left = 59:
```

OASIS and OHIOLINK

OASIS, OSU Academic Information System, is a gold mine of information and allows the user Internet connection. The Gopher system makes it easy to navigate from one menu screen to the next.

Another great feature is the ability to download files. Using the kermit protocol in a telecommunications program, files can be transferred from the remote system to your local computer.

Modem settings should be 8 databits, no parity, 1 stop bit, and VT100 terminal emulation. The phone number is 292-0741 for 2400 baud and 292-0742 for 9600 baud. Telnet Connection: cat.ohiolink.edu login: ohiolink

Ohio State University Dial-Up Connection:

1. Dial the Ohio State University
2. Username:**OASIS**

```
Translating "OASIS.ACS.OHIO-STATE.EDU"...domain server (128.146.1.7) [OK]
Trying GOPHER.ACS.OHIO-STATE.EDU (128.146.214.21)... Open
```

3. Login:**oasis**
4. Password:**guest**
5. TERM = (VT100) > press return
6. Select Information Resources
7. Select World Wide Gophers/North American/USA/Ohio/OARnet Gopher Server
8. Select To OhioLINK Central Services <Tel>
9. A warning screen will appear, press return to telnet to OhioLINK

```
Trying 130.108.120.25 ...
Connected to cat.ohiolink.edu.
Escape character is '^]'.
```

10. login:**ohiolink**

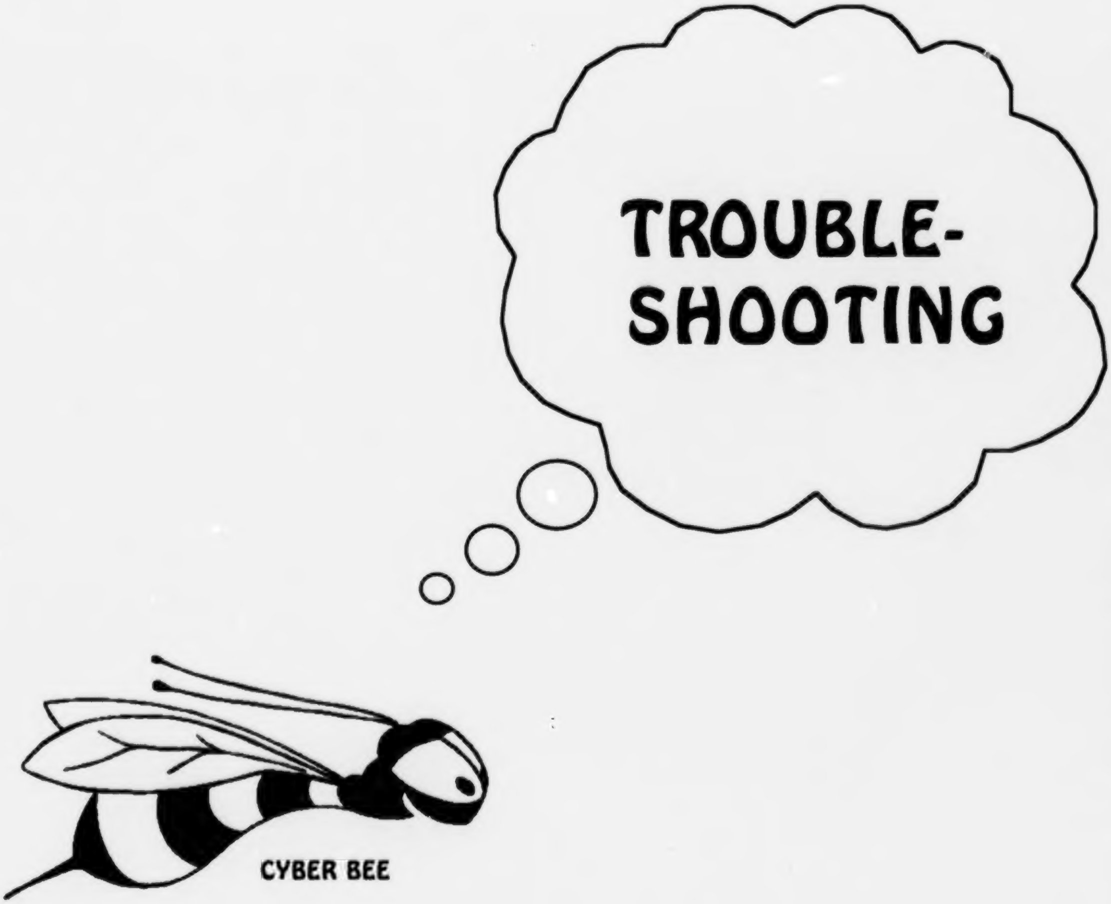
```
                    OhioLINK: Ohio Library and Information Network

                                OhioLINK Main Menu.

   Welcome to the OhioLINK Main Menu. Use your arrow keys to move the
   pointer to the item or directory you wish to view, and press return.
   Press the '?' key for further assistance.

      1.  Connect to OhioLINK Central Services             <Directory>
      2.  Connect to OhioLINK Member Institutions          <Directory>
      3.  Connect to Internet Services                     <Directory>
      4.  About OhioLINK                                   <Text File>
      5.  About this menuing system                        <Directory>
      6.  New ohioLINK Services                            <Text File>
      7.  OhioLINK Announcements                           <Text File>

         The OhioLINK menu software has been updated and new services
         added.  See the text files in the "About this menuing system"
         directory for more information...
```


TROUBLE-
SHOOTING
CYBER BEE

TROUBLESHOOTING

PROBLEM:	POSSIBLE SOLUTIONS:
1. No dial tone	• Make certain all cabling is connected. • Make certain the phone cable is plugged into the wall socket of the modem. • The phone should be plugged into the modem versus the modem plugged into the phone. Phone -> Modem -> Wall Plug • Call the telephone company to check the line.
2. No Carrier	• You are disconnected from the service, try again.
3. Phone rings but the host does not answer	• Host is not working properly, try again later.
4. Garbage characters on the screen	• This could be telephone line noise, try again. • Check to see if the baud rate is set correctly.
5. Burst of errors, then lose connection	• Try deactivating call waiting *70 then number.
6. Electrical interference	• Disconnect a cordless phone.
7. Menu looks strange and items are not displayed correctly	• This is probably a terminal emulation problem. Make sure the setting is correct. VT100 is the most common.
8. Closed by foreign host	• There are too many connections, try again later.
9. Login seems okay, but host responds with unauthorized user	• Try again, perhaps you hit the wrong key. • You must be a registered user with a valid id.
10. Screen freezes	• Try typing control-c • Try typing control-] • Disconnect and redial.

GLOSSARY

GLOSSARY

Analog - signals used in voice or music. These are continuous signals sent over telephone lines.

Baud Rate - the rate at which data is transmitted over a telephone line. 300, 1200, 2400, and 9600 bps (bits per second) are commonly used.

Bit - the most basic unit of data which can be recognized by a computer, either a 0 or a 1.

Data Bits - ASCII (American Standard Code for Information Interchange) defines 128 different characters which can be used for data transmission. Another 128 characters were added by computer makers making a total of 256 characters which may be transmitted. 7 binary digits (bits) are needed for 128 characters and 8 binary digits (bits) are needed for 256 characters.

Demodulate - conversion of an analog signal to a digital signal.

Digital, binary - a signal which is comprised of a 1 or 0, either on or off. It is not continuous.

Download - transferring a file from the host computer to your computer.

Duplex - refers to whether data can flow in two directions at the same time (full duplex) or one direction at a time (half duplex). Most modems are full duplex.

E-MAIL - electronic mail sent from one person to another via computer.

Finger - a program which examines a person's login file.

FTP - File Transfer Protocol is a function which allows the user (client) to get files from a remote computer called the host.

Gopher - a menu driven program which will automatically make ftp and telnet connections to global networks.

Gopherspace - all the information that is available through gopher.

Host Computer - the computer which holds the database or bulletin board often times called the server.

Hytelnet - a menu driven system which initiates a telnet session for the user.

Internet Address - the series of numbers or letters which identifies the site of the host computer. The suffix of the address often helps the user know what kind of service they are connected with on the network. Internet addresses are used for ftp, telnet, gopher, and e-mail. Example: Heartland Free-Net: heartland.bradley.edu (136.176.5.114)

Jughead - allows the user to search a limited area of gopherspace such as the gopher server at a specific university.

Listserv - a discussion group focused on a particular area of interest subscribed to via e-mail.

Modem - a piece of hardware which acts as a translator between computers and telephone lines.

Modulate - conversion of a digital signal to an analog signal.

OPAC - Online Public Access Catalog, library catalogs which have been computerized.

Parity - basically a primitive form of error checking between computers. The settings can range from even, odd, mark, space, or none. Normally error checking is not used and parity is set to none.

Stop Bit - marks the end of a character. 1 stop bit is the standard.

Telnet - a program which connects the user to a host computer with an interactive welcome screen. Telnet sessions allow the user to view information on a host computer as though the user were sitting at its terminal.

Terminal Emulation - allows the client (user) computer to communicate with the host computer in the same language.

Upload - transferring a file from your computer to the host computer.

Veronica - allows the user to search and find topics on gopherspace.

WAIS - Wide Area Information Server which allows the user to search a database by keyword.

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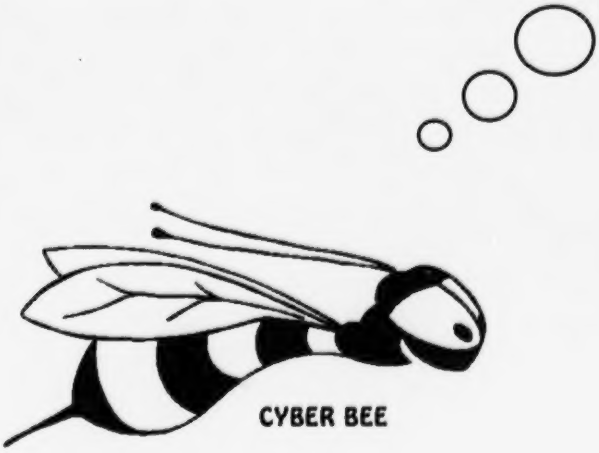

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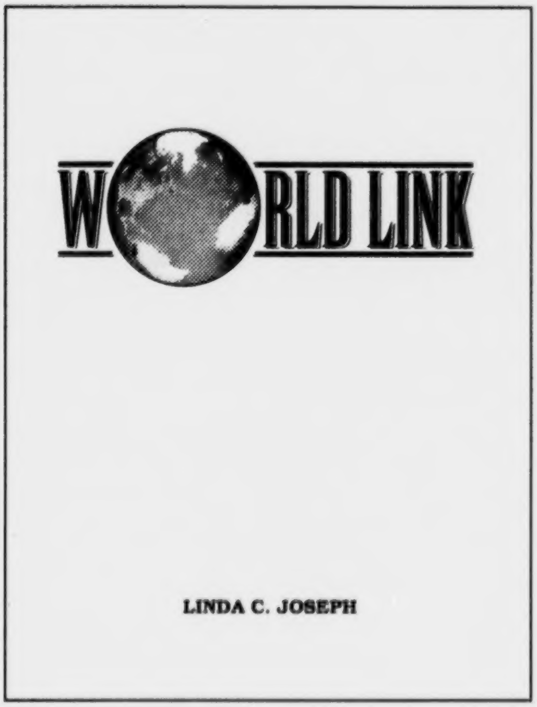
WORLD LINK NEWSLETTER
CYBER BEE



World Link

World Link explores the exciting world of information access through telecommunications and the Internet. This step-by step instruction manual covers how to send e-mail, access information resources through gopher, telnet, WAIS, World Wide Web, and transfer files via anonymous ftp. There are sections geared to K-12 curriculumm including resources, project ideas, and pointers to lesson plans. This manual has been used by teachers learning how to navigate the Internet.

About the Author: Linda Joseph is currently a Library Media Specialist, with the Columbus Public Schools, working out of the District Library Media Center. Ms. Joseph's responsibilities include inservicing district staff on networking and on-line database access and curriculum utilization. She received her Bachelor of Science degree from Bowling Green State University and holds a certificate in Computer Science. Her specialties include multiplatform computer systems/applications and electronic access skills on FirstSearch, BRS, Dialog, America Online, CompuServe, and Internet. Ms. Joseph initiated the use of information and telecommunications technology in the Columbus Public Schools and provides support to teachers, library media specialists, and district staff. During the Conference on Teaching and Learning sponsored by the Ohio Department of Education, she received the Govenor's Pathfinder Award for Educational Technology for her efforts in World Link K-12 Internet Nuggets. In addition, Ms. Joseph was the recipient of The Golden Apple Achiever Award given by Ashland Oil. She has also spoken at many local, state, and national conferences.

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